The Hunterian Oration.

Delivered at the Royal College of Surgeons of England on Feb. 14th, 1899,

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SURGEON-IN-ORDINARY TO HIS ROYAL HIGHNESS THE PRINCE OF WALES; KNIGHT OF GRACE, ORDER OF ST. JOHN OF JERUSALEM; PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND; CONSULTING SURGEON AND EMERITUS LECTURER ON CLINICAL SURGERY, ST. THOMAS'S HOSPITAL; CONSULTING SURGEON QUEEN CHARLOTTE'S HOSPITAL, FRENCH HOSPITAL, ITALIAN HOSPITAL, BRITISH LYING-IN HOSPITAL, AND ROYAL HOSPITAL, BELFAST.

YOUR ROYAL HIGHNESS, MY LORDS AND GENTLEMEN,—In accordance with the terms of a deed establishing the Hunterian Oration we celebrate to-day John Hunter's name and fame. Born on Feb. 14th in the year 1728 at Long Calderwood, a small estate his father farmed, some eight miles from Glasgow, he died on Oct. 16th, 1793, in his sixty-fifth year, celebrated alike as a great surgeon, a profound biologist, and a man of genius. It is fitting that this College, the heir to Hunter's great collection, should take care for his memory, and one way in which this is done, however inadequately, is by means of the Hunterian Oration, delivered in this theatre in alternate years. Here, in view of this noble presentment of Hunter by the foremost painter of his time, the orator is called upon to praise its foremost surgeon. Hunter was a bad sitter and it was almost by an accident that Reynolds obtained the opportunity to paint this, one of his finest portraits. In the background are indicated the bones of O'Brien the Giant whom Hunter affectionately calls his "tall man," a preparation showing the vessels of the heart suggestive of his work on aneurysm, and three volumes of his manuscript notes. As we look at the picture, painted in 1785, when Hunter was 57 years old, we perceive him in deep reverie in one of those waking dreams to which he refers in his lectures. He has paused from writing in order to think out some problem and, as he often said, it was a delight to him to think. As we dwell upon the features we cannot doubt that a sudden inspiration has flashed upon and gradually pervaded his mind, some great scientific truth or generalisation which he has grasped and is pondering with intense satisfaction. Those eyes, full of the keenest intelligence, seem in eager quest of something far beyond the visible tokens of his work. We may imagine Hunter trying, perchance, to solve some hidden mystery of life or seeking to pierce the veil which hides from us the great unknown beyond. Buckle calls Hunter a genius whose only fault was an occasional obscurity in language and in thought. "It sometimes seems," he writes in his "History of Civilisation," "as if Hunter's understanding were troubled by the grandeur of its own conceptions and doubted the path it ought to take. Still, his powers were so extraordinary that among the great masters of organic science he belongs to the same rank as Aristotle, Harvey, and Bichat and is somewhat superior to Haller and Cuvier."

EARLY LIFE.

What, then, was the manner of man whom Buckle thus characterises? I would desire to present him to you as a yet surviving influence, to recall his very words, and to show him to you as he lived. To appreciate or even fully to comprehend the labours of Hunter one must strive to judge them from the standpoint of his time, for in this way only can we form a just conception of their splendid superiority. On Hunter's early life and the many moot points it involves—his preliminary education or the want of it, whether he was for a time a carpenter by trade, why he was not sent to learn the humanities at Glasgow College like his brothers, or why in later life he spent some time at Oxford University[1] without any apparent appreciation of the academic learning there offered to him—I do not propose to dwell. John Hunter was the youngest child of a family of 10 and the spoiled son of his mother. As a boy his pleasure was to ramble in the quiet woodlands, observe the ways of the living things he found there, collect the eggs of birds and compare them together. "I wanted to know," he tells us, "all about the clouds and the grasses and why the leaves change colour in the autumn; I watched the ants, bees, birds, tadpoles, and caddis-worms; I pestered people with questions about what nobody knew or cared anything about." Hunter's scientific career dates from his arrival in London in 1748 where, when 20 years of age, he joined his brother William's school as an ill-educated youth, new to all the amenities of life, brusque in manner and negligent in appearance, yet with a keen sense of physical enjoyment. As a pupil he showed a marvellous aptitude for anatomy and soon became a successful teacher of it, but he always remained a learner in that great book of nature which was ever open before him and whose pages, until he died 45 years later, he never ceased to turn, interpreting aright many of its obscurest passages.

It was thus that Hunter started on a career destined to mark deeply the history of his time. From the moment he began to work his industry was never-ceasing, his patience was extraordinary, and his capacity for unflagging effort was so sustained that it brought him step by step to a position which has earned for him the praise and admiration of his successors. In 1759, undermined in health by 10 years of incessant toil, he contracted an attack of pneumonia and his weakened constitution was threatened with phthisis. Recommended to take rest, he only changed one sphere of activity for another, and having obtained through his brother's influence an appointment as surgeon in the army he sailed (1761) with Keppel for Belleisle and afterwards accompanied the expedition into Portugal. It was there that he studied the phases of inflammation and the treatment of gunshot wounds. When he returned to London after peace was proclaimed (1763), with nothing but his half-pay to provide the wherewithal to live upon and nothing but his genius to trust to for advancement, Hunter's life became an extremely arduous one. He was able to do with little sleep, and from four or five in the morning until the breakfast hour he dissected, then he saw patients, visited the hospital, pursued his researches, worked at his note-books, and pondered the bearing of his observations till midnight. He was elected a Fellow of the Royal Society when 39 years of age, a year later became surgeon to St. George's Hospital, and in 1776 was appointed surgeon-extraordinary to the King. In 1786 he was appointed deputy-surgeon-general in the army and three years later became surgeon-general. He also published his work on Venereal Diseases in 1786 and the following year received the Copley Medal from the Royal Society on account of many valuable papers. His great work on the "Blood and Inflammation," however, still remained unfinished after thirty years of labour bestowed upon it and was only published after his death. At 50 years of age he had reached the zenith of his surgical career, having done more to improve the science of surgery than all the other surgeons of Europe had done before him. When Pott died Hunter became the chief surgical authority in London; his opinion was highly valued in all difficult cases and he acquired a lucrative practice. There is no doubt that he was an admirable clinical teacher and a courageous operator, and although his systematic lectures on surgery were marred by a faulty delivery and occasional obscurity of style they attracted all those who afterwards attained distinction amongst their contemporaries.

LECTURER AND COLLECTOR.

Cline was 24 years of age when he attended Hunter' first course of lectures and they must have deeply impressed him, for he says that "although well acquainted with the opinions of the most distinguished surgeons then practising in London he found Mr. Hunter's lectures so far superior to anything he had conceived or heard before that there seemed no comparison between the great mind of the man who delivered them and all the individuals, whether ancient or modern, who had gone before him." We only possess an account

[1] At the outset of his career in London William Hunter desired that his brother John should be trained as a physician and sent him to Oxford to obtain the necessary classical education, but during the short period he spent there he found himself quite unable to study Latin and Greek and spoke afterwards rather contemptuously of the ancient learning. One might refer in illustration of this to what John Hunter remarked on one occasion of Jessé Foot, his spiteful biographer, who combines a very hostile criticism of everything Hunter said or did with acrid personal invective: "Jessé Foot accuses me of not knowing the dead languages but I could teach him that on the dead body which he never knew in any language, dead or living."

of these lectures on the principles of surgery at second hand, but even these somewhat fragmentary records teem with observation, are full of suggestion, and enlightened by many applications of physiological knowledge. Doubtless some of the explanations are faulty and some of the deductions incorrect, but Hunter is throughout transparently anxious to discover the truth and his search for it is as unbiassed as it is keen. Abroad the French School, then in the highest repute, received with acclamation a translation of Hunter's works. M. Royer-Collard wrote: "It is more than a book that has appeared, it is a scientific event, a discovery almost. We may now contemplate at our leisure one of the greatest monuments which the genius of science has created in modern times; we may study and learn to know every part of this great work, almost as new for us now, after fifty years have passed, as it was on the day of its birth." Hunter was deficient in what we are pleased to call general culture and doubtless he suffered in consequence. He read but little and many of his discoveries had been anticipated by others, but when this was brought to his knowledge he abandoned any claim he might have advanced. It appeared to him of small consequence by whom a discovery was made if only it proved the stepping-stone to a higher and more complete knowledge. He was no mere collector of facts in order simply to augment their number. He thought too much attention could not be paid to facts so long as they helped to establish principles, but that too many facts crowded the memory without advantage. He was not only a constant observer, but he verified his observations, and, indeed, no amount of trouble was too great for him to take. He knew well, however, that the mere accumulation of facts is valueless until the knowledge thus acquired is coördinated and in the capacity for generalisation Hunter was pre-eminent. His manner of expressing himself, both in his written works and in his lectures, left much to be desired; his spelling was defective and his command of language was uncertain, nor was his reasoning always logical. Yet it is an idle task to speculate on what Hunter would have been if he had been equipped with what is called a general education. In some respects it could scarcely have made him a greater man, for it could in no wise have increased his immense laboriousness, his passion for research, his genius for induction, or his gifts as a collector. He had a great power of estimating what was worth doing and how best to do it; his descriptions are graphic, and as an expositor of what he had to tell he is often unsurpassed. In 1789 he was attacked by severe illness and until his death four years later his life proved a suffering one. Constant work and insufficient sleep doubtless shortened his days. The paroxysms of angina from which he suffered became more frequent and serious, yet, nothing daunted, and although conscious that his end was near at hand, he worked on until the last. His death, sudden and tragic in its circumstances, happened in St. George's Hospital whilst he was demanding from somewhat hostile colleagues what he regarded as a just concession to his pupils.

In the first instance Hunter's work was biological, his range including both the animal and the vegetable kingdoms and the mineral kingdom as well, and to illustrate his investigations he became a collector. But he was chiefly and finally a surgeon, and to the development of surgery he brought all the knowledge and all the training which he had acquired in other branches of science. It is because of this that he was able to transform surgery from a barren account of isolated cases into a calling founded on anatomical, physiological, and pathological knowledge not of man alone but of the entire animal world. He carries us beyond mere handicraft and detail into the region of general principles and law. The surgery of the Middle Ages was a trade, Ambroise Paré and Jean Louis Petit converted it into an art, John Hunter elevated it to the rank of a science. Hunter's life and work inspired his successors with the spirit of observation, investigation, and experiment. We see this exemplified in his great followers, Cline, Abernethy, Astley Cooper, Travers, Green, Brodie, Lawrence, and others since their time. They have been makers of English surgery and each in turn has contributed much to raise it to that high standard to which it has attained. And now I may refer in detail, yet of necessity very shortly, to some small part of Hunter's work in illustration of what I have just said. I shall first allude to his observations on Animal Heat which are of the greatest interest, especially when we remember the imperfect quality of the instrumental aid at his disposal; then say some words as to his opinions upon Injuries of the Head and his never-to-be-forgotten work on Aneurysm; I shall briefly review his study of Venereal Diseases; and, lastly, notice his great work on Inflammation and Gunshot Wounds—the last a subject which has always interested me. Nor could the account be considered complete without a reference to the past and present state of our great museum.

ANIMAL HEAT.

Animal heat was a subject in which Hunter was much interested. He speaks of it at length in the treatises on Inflammation and on the Animal Economy and he contributed papers upon the subject to the Philosophical Transactions, and nowhere probably are his methods and the advances he made shown to greater advantage than in his experiments and observations on the heat-producing power of animals. Just a century earlier Harvey, his great predecessor, who equalled John Hunter in ability and excelled him in logical exposition, dealt with the same subject in the 71st chapter of his treatise on Development. No important advance had been made in the interval and one may compare one essay with the other, bearing in mind that Harvey was already stricken in years when he wrote the "Calidum Innatum," whilst Hunter was but 38 years of age when he performed his experiments, although they were not given to the world for 20 years after. Harvey throughout his essay is trammelled by his historical knowledge. He repeatedly quotes Aristotle and arrives at the conclusion that the heat of the blood of animals is neither fire nor derived from fire. Further than this he does not go, for to him heat is a principle inherent in the blood, and he loses himself in metaphysical speculation as to whether the blood is not the soul or even the life itself. Hunter starts in a different manner. The lapse of a hundred years had made the thermometer familiar to men of science. Black's work (published in 1757) was probably known to Hunter when he began his experiments, whilst the treatises of Priestley and Lavoisier saw the light before his essay was finally prepared for publication. Hunter had therefore a knowledge of respiration and of the function of the lungs which was unknown to Harvey.

No fact is more interesting than the uniform bodily temperature of man. In all warm-blooded animals it varies in a quite insignificant degree. It is the same at the Equator and in the Arctic Circle, in the Negro and in the Esquimaux. Explanations of the manner of heat production in animals date from the foundation of medicine. The ancients thought that there must be an internal furnace, Plato believed that the blood boiled in the heart, and it was not till the last century that pure speculation was replaced by experiment. Lavoisier first indicated the right explanation when he regarded respiration as inducing a combustion within the tissues and by degrees the present knowledge was evolved that heat is produced in every tissue and organ of the body mainly by metabolism of the protoplasm. Rubner has very recently determined the exact relation of heat production with metabolism, having proved that the heat evolved by the combustion of a given quantity of food as shown by the calorimeter is precisely equivalent to the amount of heat production in an animal fed with a similar quantity of food. Hunter's account is involved and difficult to understand. He discusses whether heat is matter or only a property of matter and supposes heat and cold to be opposite principles; he lays down that the body can generate heat and has also a cold-producing power and he is inclined to believe that there is a principal source of heat in the body, although he does not indicate its locality. Hunter considered that animal heat must depend on some unknown force like that which maintains vitality, on a decomposition going on in the body and in pretty regular progression, though not on fermentation or friction, two of the explanations current at the time, and his opinion therefore closely approaches the present one as to the potent influence of metabolism. He pointed out the essential difference between the so-called warm- and cold-blooded animals. The temperature is constant in the first and within a wide range independent of external influences, while in the latter there is much less capacity for resistance and the temperature varies with that of the surrounding medium. Donders, in 1845, again called attention to these differences and named the two groups those with a constant and those with a varying temperature, but in this he had been long anticipated by Hunter whose observations and experiments on the heat of bees and wasps, of animals asleep and awake, and their

temperature at different seasons were endless. He ascertained that they could maintain heat while placed in a cold medium and that they possessed a cooling power in an atmosphere much higher than the standard temperature of the body, a phenomenon which he attributed in part to evaporation but chiefly to a power inherent in the organism of destroying heat.

To discover the nature of heat production during the state of inflammation Hunter made many thermometric experiments in healthy and diseased parts in all kinds of animals, determining both surface temperatures and those of the interior of the body. He studied for years the temperature of bats and hedgehogs, both asleep and awake, starving and full of food. He noticed the capacity for resisting cold, up to freezing-point at least, possessed by fishes, and the lower temperature of the addled egg under the sitting hen as compared with the living one. In his letters to his favourite pupil, Edward Jenner, he repeatedly refers to the subject. He wants to learn from him the temperature of bats and hedgehogs in summer and winter. He is especially interested in the hibernation of the hedgehog and is constantly asking Jenner to send him supplies of the animal in order to ascertain its temperature at different seasons of the year. He also writes to him: "Have you any large trees of different kinds that you can make free with? If you have I will put you on a set of experiments with regard to the heat of vegetables." Even in a letter to Jenner condoling with him on a disappointment in love Hunter says, "but let her go"—he refers, I suppose, to the lady—"never mind her, I shall employ you with hedgehogs."

INJURIES OF THE HEAD.

Hunter's opinions on fracture of the skull and on trephining in injuries of the head typify the clear grasp he took of every surgical subject. They were not only far in advance of the time but would find a very general acceptance in the present day. "Depression of the external table," he tells us, "may exist and yet the inner not be hurt. In cases of fissure only it may admit of dispute whether we are always to trepan. If there be no symptoms of injured brain then it certainly will not be necessary nor even always when attended by symptoms of injured brain for the injury may only arise from concussion. However, as we cannot tell for certain whether the symptoms arise from concussion, compression, or extravasation of blood it may be more advisable to trepan as the operation can do no harm. In cases of depression of the outer table it would also be unnecessary to trepan, but it will be impossible to say certainly it is a case of this kind, for though there may be no symptoms of injured brain there may be depression of the inner table which may do the mischief afterwards. In young people a fracture with depression may cause no bad symptoms at the time, but as the patient grows up bad symptoms may arise. In all cases of violence attended with compression the trepan is absolutely necessary, although we cannot promise relief from the operation. When the compression is by bone, the situation known, and a proper one for trepanning there is no difficulty; but when the compression is by blood or pus and there are no external marks of violence it is more puzzling. However, rather than let a person die one would trepan somewhere or other and if this did not answer one would not stop there, for I have seen collections of matter on the opposite side to that on which the blow was inflicted."

He recognised the greatly increased risk to life when the dura mater was opened and the greater gravity of a collection of matter or blood between the dura and the brain as compared with one between the skull and dura. "The cases all died," he says, "when the dura mater was incised. This happened to Mr. Cooper whose dura mater I opened on account of the state of the parts beneath; he died and I think it probable I killed him." His practice was very adversely criticised and considered bad. The comment his annotator makes is that "surely nothing can be worse than to anticipate symptoms of compression by resorting to the trephine." Yet we know well that an indented inner table even although it cause no symptoms at the time of injury may give rise, as Hunter tells us, to severe cerebral disturbance in later life and the surgeon who would not trephine in a case of punctured fracture of the skull, even in the absence of symptoms, would, I think, be held blameworthy. I doubt if our modern surgery, despite its knowledge of cerebral localisation, can advance much further than Hunter was prepared to go.

ANEURYSM.

"Aneurysm," Hunter says, "is a disease that must always kill if not attended to," and had he done nothing else his operation for the cure of popliteal aneurysm would have been in itself a great achievement. He performed the operation five times, and, considering the circumstances, with marked success. He urges his views modestly and what he writes affords insight into his character. For he tells us, "I only give my own feelings. I go no further in theory than I would perform in practice. If patients be made acquainted with the consequences of the disease and would submit to, or rather desire, the operation I would have it performed, as I should also have it performed on myself were I in the same situation. Yet I would wish every man to judge for himself and not attempt an operation if he is fearful." Nothing can better illustrate Hunter's method of applying his knowledge of physiology and pathology to surgery than this staying of the amputating-knife in the treatment of popliteal aneurysm. We are all familiar with his crucial experiment, yet he himself had probably no immediate thought of its application to surgery in mind as he watched the growth of the stag's antlers in Richmond Park. He tells us that in July, 1785, he had a buck thrown and tied its carotid artery. Immediately the pulsation in the velvet ceased and the antler grew cold; but on returning a week or two later he found warmth restored and the antler growing. The buck was now killed and sent to Leicester-square, and upon examination Hunter found the ligatured artery obliterated and the circulation carried on by other, generally small, vessels above and below the place of ligature, which had thus restored the blood current in the growing antler. Nevertheless, he felt uncertain whether the same result would occur in man, and in December, 1785, he carefully explained the alternatives to his first patient, a coachman, who was suffering from popliteal aneurysm in St. George's Hospital. He told him of the usually fatal method of incision and evacuation of the sac, the better chance of life by amputation but with loss of limb, and, guided by his experience of the return of the circulation in the antler of the buck, he said he would try to save both his life and limb. The patient consented and six weeks afterwards he left the hospital cured of the aneurysm, although he died 15 months afterwards from another malady. Thus came about a total change in the treatment of aneurysm, for although Hunter had no opportunity of tying any artery but the femoral he pointed out that his method was equally applicable to other vessels, a suggestion speedily realised by two of his pupils, Abernethy and Astley Cooper. Hunter was also aware that pressure upon the artery above the aneurysm might effect a cure and he indicated the flexion method of treatment as well as the spontaneous cure of the disease when he says: "The sac by its increase often presses on the sound part of the artery and becomes the cause of its obliteration, as I have seen more than once." The Hunterian operation for aneurysm was at first but imperfectly carried out. A large portion of the vessel was exposed and four ligatures were applied. The artery and vein were included together in the ligature on the first three occasions, without apparently ill result, and Hunter did not attach importance to taking up a nerve as well. However, in the fourth case the operation was performed much as we would do it now. The patient was a man, aged 37 years, who survived till he was 86 years and on his death the limb was dissected and the specimen preserved by Mr. Wormald for the museum of the College, where it now is.

VENEREAL DISEASES.

Upon none of his many works did Hunter bestow more care and labour than on that on "Venereal Diseases." He was hampered by the belief that gonorrhœa and syphilis were due to the same cause—an idea based on a painful though faulty experiment upon himself. Yet the number of true facts he made out is very marvellous notwithstanding. He observed that syphilis originated in man and is not communicable to the lower animals and recognised the different modes of infection from venereal and non-venereal sources. What is universally called the "Hunterian chancre" is thus described: "The surface of the prepuce or the angle between the prepuce and the glans is in some cases excoriated and afterwards ulcerated. In other cases a small pimple or abscess appears on the glans which forms an ulcer. A thickening of the part comes on which at first is very

circumscribed, not diffusing itself gradually and imperceptibly into the surrounding parts but terminating rather abruptly. Its base is hard and its edges a little prominent." A description which leaves little to be desired in the way of precision and accuracy.

Hunter's observations in regard to gonorrhœa are clear-sighted and discriminating. He noticed that in the earlier stages of the malady the inflammation is restricted to the anterior portion of the urethra and that epididymitis is a late symptom. He observed that in gonorrhœa the vas may become obliterated, which he says will have no bad consequences if only one testicle be affected, as the other will suffice for all purposes. He thus anticipates the observations of Gosselin and Curling on aspermia from this cause.[2] Hunter describes the various forms of stricture in a graphic manner, points out that the bulbous portion of the urethra is more liable to the disorder than the whole of the urethra besides, and that he never saw a stricture in the prostatic portion of the urethra. He tells us that it happens generally, if not always, that gleet is associated with stricture and that this symptom often leads us to a knowledge of a stricture or at least affords a suspicion of its presence. In regard to treatment, he considers the cure of stricture can only be effected by local applications and that mercury has been given erroneously and without success. A surgeon should in general first make himself acquainted with the situation of the stricture by an ordinary-sized bougie and afterwards make use of a smaller one. Dilatation can be effected by the bougie but it is seldom more than a temporary cure. There is always remaining the original tendency to contraction and this recurs sooner or later.

His description of the use of bougies is full of practical interest. He mentions a new form as one of the greatest improvements in surgery and can scarcely persuade himself that in using it he is treating the same disease. He says: "When I was attending the first hospitals in this city in the year 1750 the common bougies were either a piece of lead or a small wax candle, and although the present bougie was then known yet due preference was not given to it nor its particular merit understood. A piece of the end of the leaden bougie sometimes broke off in the bladder and quicksilver was injected to dissolve it." There is in the museum a series of bougies which belonged originally to John Abernethy.[3] They are doubtless quite similar and probably copies of those to which Hunter alludes. His descriptions of the complications dependent on the presence of stricture are accurate and detailed. Extravasation of urine, perineal fistula, false passage, abscess in Cowper's glands, in the prostate, and peri-urethral abscess are fully described and dealt with. In treating of retention of urine which he calls "suppression" he gives an account of tapping the bladder above the pubes through the rectum and by way of the perineum; he details the circumstances which, in his opinion, indicate the choice of method in a manner which could scarcely be improved in the pages of a modern text-book; and in describing perineal puncture of the bladder he goes very close indeed to the modern operations suggested by Sir John Simon and Mr. Wheelhouse.

INFLAMMATION.

Hunter dedicated his epoch-making treatise on the "Blood, Inflammation, and Gunshot Wounds" to the King and it is in many respects his most important work. It was planned after the reduction of Belleisle and the peace of 1763 upon the basis of notes and observations made during his 11 years' residence in London and on his experience of the inflammation that usually attended on gunshot wounds. In this work Hunter makes a bold attempt to enunciate the laws which govern life, not only in healthy but also in diseased conditions. He recognises that the physiological state of the organism does not pass abruptly into that of disease but by a gradual transition. No previous physiologist had adopted similar views and Hunter's clear insight into the processes at work in the animal body furnished a new departure in biological science, the value of his opinions being shown by the impression they produced upon every succeeding worker in the same field. Not only are the thoughts new but the language in which he formulates them had in many instances to be new also and was often, as might be expected, difficult to understand. Life he believed to exist in every part of the animal body susceptible of impressions which excite action. There is no part, he says, that does not possess more or less of this vital influence and the impressions thence arising produce infinite variety in all natural and diseased acts. "I cannot tell," he says, "how far each part might possess an equal quantity of life, but if we were to judge it by its power of action we should judge tolerably well. Disease would seem to give some intelligence with regard to this matter, but how far the resistance to disease and power of restoration depend on the power of life I cannot say. I believe it may be set down as a rule that those parts endowed with most action resist disease most strongly and in disease restore themselves most readily to a healthy state." This law has exceptions, yet it certainly applies in a large degree to all pathological changes. He regarded the blood as possessed of life like the more solid parts, and that it formed the bond of union between the structures divided in a wound. In what he calls "union by first intention" he recognised a process essentially different from that of inflammation. "In the adhesive inflammation," he says, "the vessels, being enlarged, begin to separate from the mass (of the blood) some portion of the coagulating lymph with some serum and also red globules, throw it out on the surface and cover the sides (of the wound) with cells, which easily unite with the opposite ones with which they are in contact, forming the first process of adhesion." He observed the vessels passing into and ramifying in the new material so that the vessel was plainly continued from the old into the new tissue. He further adds that "in many bruises as well as in simple fracture, where the cavities are not exposed, the inflammation in most of these cases is capable of being resolved. In parts which have been divided and exposed the inflammation is in a great measure controlled by bringing them together; or where parts are not brought together nature attempts to prevent inflammation by covering the wound with blood and forming an eschar. The adhesive inflammation serves as a check to the suppuration by making parts which would otherwise infallibly fall into that state previously unite in order to prevent its access."

The views and principles he thus formulated are essentially correct; they have served as a foundation for subsequent wide-reaching investigation and form the basis of subcutaneous surgery and the treatment of wounds which, previously kept open, Hunter sought to close. After describing what he terms "true suppuration" which he contends is the result of inflammation only he goes on to speak of swellings without the usual symptoms of inflammation often containing collections of matter resembling suppuration. He considers these collections to be scrofulous in nature, common in young subjects, rare in the full-grown or old. He thinks their contents are erroneously called "purulent." To this category he refers the slow swelling of joints and of lymphatic glands, the scrofulous enlargements and suppurations of the knee, the foot, and the ankle. He completely differentiates the breaking down of a tuberculous deposit from true suppuration occurring in the course of simple inflammation. He calls attention to what he terms the "curdly substance" in the fluid, distinguishing it from true pus. He tells us these collections move easily from their original seat to some other part by slight pressure or their own weight. The migrating collection which descends from a carious vertebra to the groin he calls "an abscess in a part" in opposition to "an abscess of a part." Indeed, he gives the salient characters of these disorders with the keenest insight, and his descriptions suggest to me the masterly power of some great artist who with a few strokes of his pencil is able to indicate a powerful situation or suggest a startling action.

When we study Hunter's works we find many later views and advances foreshadowed. It is wonderful to reflect on how much he has seen and described, the correctness and depth of

[2] In the "Archives Générales de Médecine," 1847 and 1853, Gosselin contributed several papers on "Oblitération des Voies Spermatiques." In these he points out that the spermatic duct may become obliterated as the result of gonorrhœal epididymitis, that the obstruction may take place in the vas, the head of the epididymis, or in the seminiferous tubules. He states, erroneously however, that no previous author had noticed this fact and that the condition was one hitherto undescribed, the probable explanation being that there is no physiological change of function to attract notice during life and that it could only be discovered by a minute anatomical examination after death. He also shows that when both sides are affected the person must be sterile, as the absence of spermatozoa can be proved, although he will not be impotent. Curling in his work on the "Diseases of the Testicle," refers to the occasional occurrence of obstruction in the tail of the epididymis. He quotes Gosselin's investigations in 1853 which he fully corroborates. The inflammatory exudation, he says, in the walls and cavity of the ducts may cause their obliteration, generally in the globus minor, and when this is bilateral it will involve sterility.

[3] The Orator presented specimens of Hunter's form of bougie.

his observations, and his ability to utilise the experimental method. There is scarcely any branch of anatomical or physiological inquiry which he has not illumined and few subjects in either medicine or surgery which have not benefited by his researches. His remarks on the union of severed tendons were apparently suggested by the accidental rupture of one of his own and prompted Delpech many years afterwards (1816) to divide for the first time the Achilles tendon for pes equinus. This proved the foundation of orthopædic surgery developed by Stromeyer and since his time. "Of cancer," he reminds us, "no cure has yet been found, for what I call cure is an alteration of the disposition and the effects of that disposition and not the destruction of the cancerous parts." And to-day we can only, alas, endorse what Hunter said. In that branch of surgery where we boast of our greatest and most recent advances Hunter's originality is seen in the new paths of practice he indicated. He advises opening and washing out the abdomen in suppurative peritonitis and points out how often adhesions form which prevent the otherwise fatal results of a perforated bowel. He writes that "tapping is but a palliative in ovarian dropsy. The tumour generally renders life disagreeable for a year or two and then kills in the end. There is no reason why women should not bear spaying as well as other animals. It would be simply opening the cavity of the abdomen which we often do without inconvenience." Yet the establishment of ovariotomy as a successful surgical operation was postponed until the present generation. Did time permit or the occasion demand it I might quote other examples of the wonderful foreknowledge of Hunter. From the high standpoint of his own learning he was able to grasp what was previously unknown and to utilise his discoveries for the common good both of science and of mankind.

GUNSHOT WOUNDS.

John Hunter attached the greatest value to the experience he had gained while serving with the army. But little of real importance had been previously written on military surgery and the practice pursued had hardly been reduced to the common rules of surgery. We know, too, from the records of the time what imperfect education and training were accepted from those seeking admission to the public service, and that it was almost unnecessary for a man to be a surgeon to practise in the army.[4] Hunter writes: "A gunshot wound is often not understood at first. It may be impossible to tell what parts are implicated; a bone or large vessel may be contused or a viscus injured. A part of the intestine may have received a contusion so as to cause a slough, and on the slough becoming separated a new symptom will probably appear, for the contents of the intestines will come through the wound. But these cases will not be so dangerous as if the same loss had been produced at first, for by this time all communication will have been cut off. Nor will it be so dangerous as when a considerable blood-vessel is deadened, for in this case when the slough comes off, the blood getting a free passage into the wound, as also out of it, death will probably immediately follow." "Gunshot wounds," he goes on to say, "often do much mischief to vital parts and their effect will be according to whether the soundness of the part wounded is essential either to the health of the whole body or the uses of the part wounded, as an important viscus whose function is arrested or a large joint whose uses are impeded. Gunshot wounds often admit of being classed with small deep-seated wounds (punctured) which are always of a particular kind. Indeed, the variety of circumstances attending gunshot wounds is almost endless." He discusses the different effects resulting from the variable velocity of the projectile and the consequent differences in injuries of bone and of soft parts. He speaks of the straight course and the keyhole punched-out fracture produced in the bone by a bullet with great velocity and the devious tracks it may follow when travelling slowly. The wounds made by musket-balls in the wars of his time were very different from those produced by modern rifles whose small bullet may traverse the soft parts without doing them much damage while it pulverises the bone. The old flint lock propelling a large spherical bullet with a small velocity produced large contused or lacerated wounds of soft parts and splintered the bone.

There is no doubt that Hunter's work on gunshot wounds was a great step in the direction of their more rational treatment and laid the foundation of modern military surgery. "It has been hitherto recommended," he writes, "and universally practised by almost everyone, to enlarge the external orifice of gunshot wounds immediately on their being received, or as soon after as possible, and this without any discrimination between one gunshot wound and another." Hunter emphatically protests against this practice if only for the reason that few gunshot wounds are alike and the same practice cannot apply to all. "It is contrary," he urges, "to the rules of surgery as founded on our knowledge of the animal economy to enlarge wounds simply as wounds, for no wound, however small, should be enlarged unless something necessary is to be done which cannot be executed unless the wound be enlarged. This is common surgery and ought to be military surgery." Here his rare intelligence ran counter to generally received opinions and to the practice strongly inculcated by his illustrious predecessors, Ambroise Paré, Richard Wiseman, and Baron Percy. "It would be absurd, however," he continued, "for anyone to suppose that there is never occasion to dilate gunshot wounds at all, but it is certain that there are very few in which it is necessary." He tells us how seldom a wound need be dilated on account of the bullet itself; "balls when obliged to be left seldom do any harm when they are not in a vital part and have been known to lie in the body for years and yet the person has found no inconvenience." There can be little doubt of the soundness of this doctrine and it is certain that in very many instances greater injury has been inflicted in the unavailing search after the bullet or even in its extraction than the wound of itself could cause. Yet how persistently this superstition, I would call it, lingers in the public mind. The first anxiety of a man who is shot, soldier and civilian alike, is that the bullet, wherever lodged, should be forthwith extracted. The number and infinite variety of bullet-finders and bullet-extractors which have been invented show that the art of bullet-hunting has flourished in spite of all that Hunter urged against it. "If the wound will admit it, the finger," he says, "is the best instrument to make exploration with," an opinion I heartily endorse, especially since the risks formerly attending its introduction may now be removed.

What would Hunter think of our improved methods of diagnosis or the discovery by the new photography of the exact position, amount of comminution and direction of a fracture, the locality of a foreign body, and the determination of the depth and relation to the surface of a lodged bullet, so that if for any reason it be deemed desirable to operate it may be cut down upon with almost as much precision as if the tissues covering it were translucent?

"What," he inquires, "is the very best practice where it is supposed the intestines may be wounded? I should suppose the very best practice is to be quiet and do nothing." How much therefore he would admire an exploratory operation for the discovery of a perforated intestine, the restoration of its continuity by one of the methods employed, the aseptic rendering of the abdominal cavity, and the frequent recovery of the patient without reaction, pain, inflammation, or any sort of complication. "Little notice," he tells us, "has been taken of wounds in the chest and lungs because it was assumed nothing could be done for them." "Yet I have seen," he says, "several cases of gunshot injury where the patient got well after being shot quite through the lungs." And our recent military experience proves how right Hunter was, since many persons whose lungs have been traversed by modern projectiles not only recover, but seem scarcely to suffer inconvenience from the injury either at the time or afterwards. Hunter differs, however, not only from those who preceded him, but from modern practice and opinion, in his advocacy of secondary in preference to primary amputation. He considers immediate amputation improper, as the surgeon cannot, under the circumstances, master the case adequately, and few amputations on the field of battle do well, "the only argument in their favour being that the wounded man is moved with greater ease without a limb than with a

[4] Smollett entered the navy in 1739 when he obtained the post of surgeon on a king's ship. In "Roderick Random" which was published in 1748 he described the life and character of the naval surgeon at that time and the life so described was a terrible one. Just 100 years later, 1848, Huxley entered Her Majesty's navy. He was assistant surgeon to the *Rattlesnake* during her cruises off the northern and eastern coasts of Australia and the observations he then made formed material for his well-known work on "Oceanic Hydrozoa." John MacGillivray was naturalist to the expedition, Huxley being what would have been formerly called a surgeon's mate. The difference between Huxley and Smollett sufficiently emphasises the different condition of the public service at the present time and what obtained 100 years ago, when the captain of the ship, Smollett tells us, was too much of a gentleman to know a surgeon's mate even by sight.

shattered one"; but I think it is now universally admitted that cases which demand amputation should be operated upon at the earliest period, either in the first dressing-station or the field hospitals, and that a delay of 24 hours or longer very seriously increases the risks.

While assuredly Hunter was far in advance of his predecessors in the teaching and practice of military surgery, in some instances to such a degree that his views would hold good to-day, yet the conditions of warfare have become so changed and gunshot wounds are so different that the surgery of the battlefield no less than that of civil life has been revolutionised. Hunter clearly recognised that the destructive effect of a bullet on animal tissues depends on its velocity rather than on its weight. This is the characteristic by which the modern small-bore bullet, with its cupro-nickel or steel envelope, differs so greatly from the round bullet of Hunter's day and on which those modifications of gunshot injuries which have taken place depend. The old round bullet produced at all ranges more severe wounds of the soft parts than the modern missile does, and at short ranges probably caused as extensive a fracture of a bone, but it so rapidly lost its energy that at distances of even a hundred yards it frequently flattened out against the shaft of a long bone without causing fracture. The modern bullet produces at almost all distances unimportant wounds of muscular tissue, but it is apt to cut pieces out of the large vessels, which render any hæmostatic process ineffective, and in consequence death from primary hæmorrhage on the battlefield will be far more frequent than before. Injuries to long bones by hard-mantled bullets produce, at ranges of over 2000 yards, tunnelling without any great fragmentation, while as the range decreases the extent of the fissuring, the number of the fragments, and the distance to which the latter are driven steadily increase, until at ranges under 300 yards the extensive damage and destruction on the exit side of the limb have all the appearance of being produced by a small-arm shell or explosive bullet. Gunshot fractures of the shaft and of the articular ends of the long bones were considered to demand immediate amputation in Hunter's day, a rule which permitted but few exceptions for military surgeons of former times. In modern surgery the rule, if any, tends the other way, and only in exceptional cases—those in which the injury is not confined to the bone and unimportant soft parts, but in which the main vessels and nerves are also implicated—are more radical procedures to be recommended. In consequence of the suppuration which formerly always occurred in these cases, the comminuted and displaced pieces of bone acting as foreign bodies had to be thrown off by nature's efforts, and consolidation of a fracture was often long delayed or did not take place at all, while cases treated conservatively usually died from surgical infective diseases. In recent campaigns gunshot fractures of the long bones, even when greatly comminuted, and penetrating injuries of joints have been treated by conservative methods with success, except in cases where the blood- and nerve-supplies of the limb below are cut off by laceration of the main trunks. Amputation is only resorted to when no other resource remains to the surgeon, and occasionally, perhaps, when military exigencies necessitate the immediate transference of the wounded to the base of operations, circumstances which render conservative treatment, at all events for injuries of the lower limb, either impossible or at least more dangerous than operation. No doubt some small percentage of cases of gunshot injury of long bones and of large joints did formerly recover without amputation; but it has only been since Listerian methods of treatment were perfected that conservative treatment in time of war on a large scale and as a rule has become possible to the military surgeon. That Hunter was the great military surgeon of his time may be seen both in his teaching and in his writings, and our opinion of his greatness must be enhanced when we remember the scanty means at his disposal for bringing his surgery to a successful issue.

THE HUNTERIAN MUSEUM.

In 1799, six years after Hunter's death, Parliament purchased his collection and subsequently handed it over in trust to the Royal College of Surgeons of England for the public advantage. Further grants of money were voted to the College to erect a proper building for preserving and extending "Master" Hunter's collection and to build a theatre for the delivery of public lectures on anatomy and surgery. The museum has been fitly called Hunter's chiefest monument and is surely sufficient for the fame of any man. He worked for it constantly, sacrificed to it his other occupations, and devoted all his earnings to its development. His aim was no less than to illustrate the whole question of life both in health and in disease. Nature's handiwork in all its manifold perfections is there clearly shown forth by the never-ceasing labour of this great intellect. Any ambiguity that may sometimes mar his written words is not to be found in the careful arrangement of specimens which Hunter has displayed to us. The exposition is one almost too great for the human mind to grasp, much more for one man in any adequate sense to realise. Yet Hunter did in the main compass his splendid aspirations. He laid all his friends under contribution. Sir Joseph Banks procured for him every strange creature he could lay hands upon and divided with him the collection he had made during his travels round the world—indeed, for long Hunter had the refusal of every curious animal imported into the country. Smollett, a great friend of Hunter, illustrates the public view when he writes to him, "I mean to send you my poor carcass in a box to be placed amongst your rarities." Hunter's letters to his friends are full of urgent appeals to send him everything which he could utilise for his purposes. His later letters are, if possible, more importunate than the earlier ones. He expresses regret to a correspondent at the loss on the way home of two Havannah birds and a collection of insects. He much wishes for information on the natural history of the swallow whose habits he remembered in Portugal. He wants ostrich eggs just about to hatch and directs them to be put into proof spirit after cracking the shell. "If a foal camel was put in a tub of spirits and sent I should be glad. Is it possible to get a young tame lion or, indeed, any other beast or bird? If chameleons were sent it should be in the spring. I want everything respecting the bee tribe, such as wasps with their nests, also hornets with theirs." What a number of demands and in one letter out of many similar ones, and what an illustration of his zeal in the acquisition of knowledge!

The Hunterian collection of comparative anatomy cannot fail to excite surprise and admiration. We find in it an attempt to unravel the mystery of life, to display the various structures by which the physiological processes in plants and animals are carried on, commencing with the lowest forms and ending with man himself. The anatomical preparations are arranged according to the subjects they are designed to illustrate, and we have besides preparations of healthy and diseased conditions in plants, a series of skulls, skeletons of almost every known form of animal, many examples of deviations from normal types (which Hunter showed to be nothing essentially apart from natural development, but aberrations due to excess or defect or by reason of arrest in the ordinary process of growth), and also a considerable number of fossils. Hunter's collection numbered nearly 14,000 specimens with 10 volumes of manuscript description and notes, beside other catalogues and numerous drawings. He dissected more than 500 different species of animals, many of them more than once, and has left records of 315 dissections. What man ever accomplished such a prodigy of work or ever before illustrated his inquiries on so gigantic a scale? He proves that during the development of the higher organisms the parts usually undergo progressive changes from simple to more complicated structure and that the transitional form can often be recognised as a permanent condition met with in some so-called inferior form of life. The wide-reaching effect of these principles of Hunter finds its further development in the works of Darwin and other philosophers who have followed in his footsteps but have not departed from his methods. Since Hunter's time the number of preparations has increased to almost 50,000 specimens. His threescore of skulls have now grown to nearly 4000, illustrating many difficult problems in ethnology. The pathological collection is five times as numerous and in all the departments there has been continuous increase. Hunter's legacy to the world of wisdom and knowledge was great but the example furnished to us by his indomitable energy and clear recognition of the importance of an extensive knowledge of nature in order to rightly interpret its problems is even of greater value. The College has proved the wise custodian of this great institution and many of its most illustrious sons have devotedly worked towards its completion and perfection. Nowhere in the world exists its

like. It is one of our national glories and it is a glory for our profession.[5]

CONCLUSION.

Hunter was a profound philosopher, a great naturalist (using the term in its widest sense), a pre-eminent collector, and the foremost surgeon of his time. It was to make surgery more perfect that all his work subserved and in it he reached the highest rank. He rendered to his art and science greater service than any man had done before him, and his claim to our admiration rests not merely on what he did but on what he suggested might be done. On the brass sacred to his memory in Westminster Abbey this College calls him the founder of scientific surgery. His claim to this proud title was asserted in the first of the Hunterian Orations; it has been renewed in every successive oration where Hunter's life and labours are reviewed by the most eminent of our profession, and it has never been called in question. One cannot but feel impressed at the multitude of the subjects which engaged Hunter's interest and attention, the greatness of his achievements, and the far-reaching influence of so many of his inquiries. His spirit survives in the energy of others who follow in his footsteps and serves to stimulate every student of natural science. He possessed that high form of intelligence which can convert abstract scientific truth to practical uses; hence it is that, finding surgery scarcely more than a mechanical art, he transformed it into a scientific calling, based upon principles which rest on the solid foundations of biological knowledge and collateral science. His supreme endeavour was to study life in all its many-sided manifestations. This is the noblest form of study and the most inexhaustible, yet the problem of life will remain a mystery transcending the power of human investigation or human imagination. Billroth regarded Hunter as one of the greatest men the English nation has produced and that his work on "Inflammation and Gunshot Wounds" is the corner-stone of modern English and German surgery. "From Hunter's time to the present day," he says, "English surgery has had about it something noble and nowhere either in ancient or modern times can the pattern be found of a grander scientific career." Masters of our craft at epochs in surgical history have from time to time declared their art to be then so near perfection that further improvement was impossible. May we not, nevertheless, hope and expect that surgery will accomplish new triumphs and yet greater completeness? I am not of those who think there can be any finality in human progress; to believe so would, I consider, render life no longer worth living in its higher sense and greater aspirations. Rather let us consider ourselves as having but just crossed the threshold of the great temple of science, knowing only a small part of that which still remains to be known, and be mindful of Bacon's words: "Let no man upon a weak conceit of sobriety or an ill-applied moderation think or maintaine that a man can search too farre or be too well studied in the booke of Gods word, or in the booke of Gods workes, but rather let men awake and cheerfully endeavour and pursue an endlesse progresse or proficiency in both."

Much as we have already achieved in every branch both of the science and art of our profession, more especially during the latter half of this century now drawing to a close, our past experience tends to show that in the future likewise great things shall come to pass. In our own lifetime surgery has been wholly changed. The discovery of anæsthesia has lifted a weight of sorrow from the world, and, as Oliver Wendell Holmes, both poet and physician, has expressed it, "the fierce extremity of suffering has been steeped in the waters of forgetfulness and the deepest furrow in the knotted brow of agony has been smoothed for ever."[6] Anæsthesia has, besides, rendered surgical procedures capable of a realisation which not even in dreams could we have previously supposed possible. It has permitted many new departures in surgery, made many operations feasible which had previously been condemned, and has proved a help of extreme value in the diagnosis of disease. Furthermore, one of the scientific descendants of Hunter, deeply imbued with his spirit, transcendently patient and painstaking in detail as was his master, as minute an observer of nature's ways, and as careful an experimenter, after much trying and much thinking has realised in the discovery of the methods of antiseptic surgery a benefit to mankind which only surgeons can to the full appreciate. What was hazardous before is now rendered safe, what was accomplished with pain and suffering is now free from both. There is scarcely a limit to what might be said in praise of this great work. The name of Lister, like that of John Hunter, will stand forth in the records of scientific progress as one who has immeasurably benefited humanity and as the author of the means whereby surgery has been mainly enabled to make that marvellous progress of which we are all so proud. This is recognised throughout the world, and were I not convinced that our science has fresh achievements in store I should say that Lister had finally crowned the edifice whose corner-stone Hunter laid.

Your Royal Highness, my Lords and Gentlemen,—John Hunter's career has been presented to audiences in this theatre from almost every aspect and his life and work have been reviewed by the greatest of his successors, some of whom have compelled our admiration by the eloquence and the beauty of the language in which they have expressed their thoughts. I do not expect to equal these, yet I would hope that my story, although a "twice-told tale," has aroused in you some measure of sympathetic response. The study of Hunter's works is in itself a liberal education and all who love their profession and who have its well-being at heart will do well to study them. They show his almost superhuman energy, the versatility of his genius, his extraordinary powers of observation, and, beyond all these, the absolute mastery of his will over bodily suffering. Of all the great minds which have illuminated the scientific world and guided its destinies John Hunter's is the one which first directed surgery into the pathways of science and dying left to surgeons a future in the memory of his past. He is the man without whose aid it is impossible to imagine surgery all that it now is; we cannot take his influence away and yet retain all that we now possess. Our science might have spared some other workers but it could not have become the science we know without John Hunter. This great surgeon, one of the greatest men who ever practised surgery, has now long gone to his rest. Cut off in the midst of his glory he died in harness. Yet though he be gone we may well apply to John Hunter what has been said of a pre-eminent statesman lately passed away: "The nation lives that has produced him, may yet produce others like him, and in the meantime it is rich in his memory, rich in his life, and rich above all in his animating and inspiring example."

OBITUARY NOTICES.

According to the terms of the deed already mentioned which establishes the Hunterian Oration it is part of my

[5] From Mr. Stewart, the Conservator, I learn that the number of Hunterian specimens now in the museum is 11,324 and the additions since made amount to 37,802 or 49,126 in all. The numbers in the different groups are:—

	Hunterian.	Additional.	Total.
Physiology: plants and animals, arranged according to function	3,751	3,186	6,937
Human osteology: skulls, skeletons	106	6,582	6,688
Comparative osteology	3,802	13,560	17,362
Plants: invertebrata, external forms	1,129	2,468	3,597
Pathology, human and comparative	2,092	8,207	10,299
Calculi	441	2,575	3,016
Instruments	3	916	919
Human normal anatomy	—	308	308
Totals	11,324	37,802	49,126

There were but two Hunterian articulated skeletons, 44 skulls, and six skeletons of fœtus. To these have been added by the College 57 articulated skeletons and 3770 skulls. There is proof that Hunter dissected at least 500 different species of animals, not including repeated dissections of different varieties of the same animal and numerous dissections of plants. He made preparations so as to display the distinctive character of each animal and had careful drawings made from recent dissections besides. He left at his death an enormous mass of manuscript notes, including nine folio volumes of descriptions of dissections of animals, one volume of the natural history of vegetables, notes upon fossils, the notes he compiled for his Croonian Lectures, besides a very large number of observations concerning anatomy and physiology, the experiments he had made, on surgery generally, and also many notes of surgical cases. These were destroyed by Sir Everard Home—a very holocaust.

[6] "In this very hour, while I am speaking, how many human creatures are cheated of pangs which seemed inevitable as the common doom of mortality and lulled by the strange magic of the enchanted goblet, held for a moment to their lips, into a repose which has something of ecstasy in its dreaming slumbers? The knife is searching for disease, the pulleys are dragging back dislocated limbs, nature herself is working out the primal curse which doomed the tenderest of her creatures to the sharpest of trials, but the fierce extremity of suffering has been steeped in the waters of forgetfulness and the deepest furrow in the knotted brow of agony has been smoothed for ever."—Introductory Lecture, by Oliver Wendell Holmes, delivered in the Massachusetts Medical College, Nov. 3rd, 1847.

duty to add some appreciative words in memory of those colleagues whose labours have contributed to the improvement or extension of chirurgical science and who have died since my predecessor spoke in this place.

Oliver Pemberton.—The first of these is Mr. Oliver Pemberton, surgeon to the Queen's Hospital in Birmingham, Bradshaw Lecturer in 1894, and member of the Council, who died on March 7th, 1897, at the age of 71 years. His strongly-marked individuality and wise judgments, given always in a kindly and considerate manner, have been much missed. He was educated at King Edward's School in Birmingham. Subsequently he entered St. Bartholomew's Hospital and formed fast friendships with many of the distinguished men belonging to that great institution. It was altogether delightful to listen to the affectionate banter which passed between him and his intimate friend and fellow student Sir William Savory. Pemberton made valuable contributions to surgical literature, was a man of culture, an able clinical teacher, possessed of clear common sense, an acute judgment, and admirable temper. He spoke ill of no man and certainly none could speak ill of him.

James Blake Bailey.—Much too early and to the great loss of this College Mr. Bailey, its librarian, died on April 14th, 1897, at the age of 48 years. Although not a medical man he possessed an intimate acquaintance with medical literature, both English and foreign, and a wise, critical, and literary discernment. He had a knowledge of the contents of our great library at his finger-ends and took a keen and active interest in collecting everything bearing on the life and work of Hunter. Everyone who frequents our library must gratefully remember Mr. Bailey's helpfulness, his accuracy, his never-failing genial courtesy, and recall his bright intelligence and manifest sympathy with those who sought his assistance. Mr. Bailey took a real pride in our library which at present contains some 60,000 volumes and is increasing at the rate of about 1000 volumes each year. We owe it to him that the library has become a perfect model of good arrangement; the books can be consulted with facility and the readers have increased enormously. Mr. Bailey received his early training in the Radcliffe Library at Oxford University, and whilst he was with us he had the energy and ability to keep his terms at Oxford and take an Arts degree. He took a great interest in the byways of literature and wrote the "Diary of a Resurrectionist" which gives a graphic account of the scandals prevailing before the passing of the Anatomy Act.

Walter Rivington.—Mr. Rivington died on May 9th, 1897, at the age of 60 years, whilst still a member of the Council. He was surgeon to the London Hospital and a man of considerable literary attainments. He wrote an exhaustive history of the medical profession. He was a brilliant anatomist and a good surgeon and his work was accurate and painstaking, as is especially manifest in two of his surgical essays, "Tumours of the Orbit" and "Rupture of the Urinary Bladder." He entered the Council as a reformer and had a strong wish to make radical changes in the constitution of the College. He stated his views in debate with courage and discretion also and, although few endorsed his opinions, it was apparent that they were the result of conviction and were urged from a sense of public duty.

Edward Lund.—Mr. Lund, who died on Feb. 4th, 1898, was a provincial surgeon of the best type and a man whose presence at our Council meetings was always welcome. He was an examiner for many years and a Hunterian professor. As surgeon to the Manchester Royal Infirmary, in succession to men like Thomas, Turner, and Southam, he worthily maintained the reputation of the medical school. He was largely instrumental in uniting it to Owens College, whence has eventually arisen the Victoria University. Mr. Lund published many contributions on surgical subjects, one especially good on "Internal Urethrotomy." He had great gifts as a teacher, was resourceful and ingenious as a surgeon, and thorough in everything he did.

Henry Lee.—Mr. Lee, once a member of the Council, Hunterian lecturer and surgeon to St. George's Hospital, died on June 11th, 1898, at the advanced age of 81 years. He early devoted his attention to pathology, especially to that of the veins. Afterwards he attached himself to the study of syphilis, and did much for its better treatment, and in this branch of knowledge he was an unquestioned authority. He was a good practical surgeon, an able clinical teacher, and most genial in his intercourse with men.

SEVEN CASES OF VOLVULUS TREATED BY ABDOMINAL SECTION; THREE RECOVERIES.[1]

BY H. LITTLEWOOD, F.R.C.S. ENG.,
SURGEON TO THE GENERAL INFIRMARY, LEEDS.

DURING the past three years I have had what I believe to be a somewhat unique experience in cases of volvulus, having been called to operate seven times for this condition and having had the good fortune to record three recoveries. Up to the time of seeing my first case (on Dec. 3rd, 1895) I had never seen a case of volvulus either in my own or in the practice of any other surgeon, and the condition is apparently so rare that Kocher stated in a paper on Intestinal Obstruction which he read at the meeting of the British Medical Association at Edinburgh that he had only operated six times for volvulus and that only one of his patients recovered. I have therefore thought that my cases might interest the members of this society and have ventured to bring them before you to-night. I have not arranged them in chronological order but have taken the cases of volvulus of the large intestine (four in number) first and then described the three cases of volvulus of the small intestine. I have described Case 5 somewhat more fully in detail than the others.

CASE 1. *Volvulus of the large intestine (part of the transverse and descending colons and part of the sigmoid flexure); abdominal section; death.*—The patient, a man aged 62 years, was admitted to the Leeds Infirmary under the care of Dr. Barrs on Dec. 3rd, 1895. On Nov. 29th, 1895, he had complained of some pain in his body and from this date neither motion nor flatus had been passed. On the 30th the abdomen had become distended; the distension rapidly increasing. On Dec. 2nd he was crying out with abdominal pain which was relieved by morphia. On admission the abdomen was found to be distended, the distension being very much more marked in the upper part above the level of the umbilicus. He complained of great pain and tenderness which were most intense in this region. No liver dulness could be defined and the heart was displaced upwards so that the apex beat was in the third intercostal space. The abdomen was everywhere resonant. There was no visible peristalsis. There was a small ventral hernia in the right iliac region. No hard tumour could be felt either by abdominal or rectal examination. He had not vomited. The temperature was normal; the pulse was rapid. I saw him with Dr. Barrs and operated soon after.

Chloroform was administered at 12.45 A.M. on Dec. 4th. An incision about three inches long was made in the middle line of the abdomen. The lower limit was at the umbilicus; this was afterwards prolonged to the ensiform cartilage. On opening the peritoneum general peritonitis was found and a considerable quantity of brownish fluid escaped. Part of the colon was enormously distended; it occupied the greater part of the epigastric, umbilical, and right and left hypochondriac regions and pushed upwards the diaphragm. The small intestine, the cæcum, and the ascending colon were not distended. A piece of small intestine was in the sac of the ventral hernia; it was found to be slightly adherent and was removed from the sac. The distended bowel was now brought outside the peritoneal cavity and was found to be a volvulus composed of part of the transverse colon, the splenic flexure, the descending colon, and part of the sigmoid. The volvulus was about 10 inches in diameter at its widest part; it was twisted from left to right, there being rather more than a complete turn; its mesenteric stalk was about two inches in diameter and was situated about the inner part of the left lumbar region. The bowel was of a purple colour and numerous hæmorrhages were present. The volvulus was untwisted but it did not decrease much in size, so it was punctured with a scalpel; a large quantity of foul-smelling gas escaped and a small quantity of liquid fæces. The puncture was closed by a catgut stitch and the gut was easily returned into the abdominal cavity. The patient was in a very collapsed and critical condition after the operation and he died in about 30 hours. During this time he suffered greatly

[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society on Dec. 2nd, 1898.

from abdominal pain which was with difficulty controlled by morphia. The bowels were twice opened, the motions being dark brown and liquid.

The following were the measurements of the volvulus made at the post-mortem examination: From the cæcum to the commencement of the volvulus, 21 inches; from the anus to the termination of the volvulus, 15¼ inches; the convex side of the volvulus, 27½ inches; the mesenteric attachment of the volvulus, 10½ inches; the length of the meso-colon at its widest part, five inches; and its diameter at the widest part, seven and a quarter inches.

CASE 2. *Volvulus of the cæcum, part of the ascending colon, and part of the ileum; operation; recovery.*—A man, aged 61 years, who was sent by the late Dr. Horsfall of Masham, was admitted into the Leeds Infirmary under my care on Nov. 23rd, 1896. The patient had been quite well until a week before admission. He then had pain in the abdomen which had been constant since, becoming at intervals much worse. The bowels had been opened on Nov. 18th, but since that time neither flatus nor motion had been passed. He had suffered from hiccough on Nov. 21 and 22nd, but he had not vomited. He had a right inguinal hernia when he was a young man. In 1870 an operation was performed, but the rupture returned a few years later and since then he had worn a truss. The right inguinal hernia rapidly filled after reduction with what appeared to be collapsed small intestine. On admission the patient's pulse was 90 and of good quality, the tongue was dry, and the lower part of the abdomen was greatly distended and everywhere resonant. The skin near the lower part of the abdomen was tense and distended portions of intestine could be seen and felt. There was no visible peristalsis. On rectal examination the pelvis was found to be filled with distended bowel.

Ether was administered and the abdomen was opened in the middle line below the umbilicus. Distended coils of intestine immediately presented. The incision was prolonged upwards for two inches. The distended portion of the bowel was drawn out of the peritoneal cavity and was found to be a volvulus of the cæcum, part of the ascending colon, and the lower part of the ileum. Some fluid escaped from the cavity. The twisted bowel had a long mesentery and was rotated nearly one and a half times on its mesenteric axis. The various parts were greatly distended, chiefly with gas, and the bowel wall was in a condition of passive congestion. The large intestine was more than five inches in diameter and the small intestine was proportionately distended. The cæcum formed the apex of the volvulus. At the point of twisting were several small hæmorrhages into the mesentery. The twisting of the bowel was from right to left and it was untwisted in the opposite direction and the contents of the volvulus were gradually forced onwards by gentle manipulation. The anus at the same time was dilated and a great quantity of flatus and liquid fæces were passed. The hernia was reduced and the contents were found to be normal. The bowels were then returned into the peritoneal cavity. At this stage the patient stopped breathing and artificial respiration was performed for four minutes. The abdomen was closed and a small portion of the cæcum was stitched to the lower part of the wound, so that if the obstruction continued a tube might be inserted and also to fix the bowel to prevent a recurrence of the twisting.

On Nov. 24th the patient said he felt stiff inside. The temperature was normal and the pulse 96. Rectal injections of four ounces of warm water every four hours were employed. The temperature was 99·4° F. on the day of the operation; after that it was normal. The patient made a good recovery; he got up at the end of three weeks and went home on the twenty-fifth day after the operation.

CASE 3. *Volvulus of the sigmoid flexure; operation; death.*—The patient was a woman, aged 57 years, who was under the care of Mr. West of Morley. I saw her with him on March 25th, 1896, and I operated at 3 P.M. on the same day. The history of the case showed that she had had an attack of intestinal obstruction which commenced on Jan. 18th, 1896. On Feb. 6th the bowels were suddenly relieved. The patient said that she had never been quite well since. On March 19th she commenced to suffer from pain in the body and vomiting. The bowels were opened on March 22nd and some flatus had passed, but since then nothing had passed. She was a very thin woman. The abdomen was distended, especially in the hypogastric and left iliac regions. There was some visible peristalsis. The abdomen was everywhere resonant and no tumour could be felt. On rectal examination no narrowing in the rectum was discovered. Douglas's pouch was filled with greatly distended bowel.

Chloroform was administered at the operation. The abdomen was opened in the middle line below the umbilicus by a three-inch incision. The hand was inserted into the peritoneal cavity; most of the small intestines were collapsed. The pelvis and the lower part of the abdomen were filled with a hugely distended coil which turned out to be a volvulus of the sigmoid flexure; it was about four inches in diameter. This was pulled outside the abdomen and was found to be twisted on its mesenteric axis from right to left. About 18 inches of the sigmoid formed the volvulus. This was untwisted; there was also a narrow band from the omentum crossing it, the other end of which was attached to the right iliac fossa; this was divided. As the volvulus contained a large quantity of liquid motion and gas and the walls appeared considerably damaged by the distension an incision was made in its long axis about an inch in length and about a quart of thin fæcal material and a large quantity of foul-smelling gas were evacuated. This was closed by a continuous Lembert's suture, the bowel was returned into the abdomen, and the abdominal wound was closed. The patient stood the operation well; the pulse was about 100 at its completion. The morning after the operation the temperature was 103°F., and the pulse was 104. No flatus was passed after the operation nor did she vomit. She got gradually worse and died 40 hours after the operation. There was no post-mortem examination.

CASE 4. *Volvulus of the sigmoid flexure; operation, recovery.*—The patient was a healthy, well-nourished girl, aged 10 years, who was under the care of Mr. Arthur Ellison of Leeds. I saw her with him on Jan. 25th, 1898, and operated at 10.30 P.M. The patient had commenced to feel ill on Jan. 24th and on the next day she complained of of pain in the body, which soon became distended and was associated with a rapid pulse and vomiting. When I saw her she was greatly collapsed, the pulse was rapid, and the hands were becoming cold. The abdomen was much distended and was tender and not moving with respiration. No localised swelling or enlargement could be seen or felt. On rectal examination the pelvis appeared to be full of distended intestines.

Chloroform was given by Mr. Ash and Mr. Ellison assisted me in the performance of the operation. The abdomen was opened in the middle line below the umbilicus by an incision three inches in length. Some thin semi-purulent fluid escaped and some distended and inflamed coils of intestine presented. Some of these were pulled outside the abdomen and protected by hot towels; between these coils were several pieces of yellowish-white lymph. There appeared to be a general peritonitis. A large distended coil was now felt which filled up the pelvis and turned out to be a volvulus of the sigmoid flexure, about 12 inches in length and about three inches in diameter. It was twisted on its mesentery from left to right; the lowest portion of the volvulus appeared to correspond to the top of the rectum. The volvulus was untwisted without pulling it outside the abdomen. When this had been done Mr. Ellison thoroughly dilated the sphincter ani and this enabled me to squeeze out a large quantity of flatus and fluid fæces from the sigmoid and from the distended coils of bowel beyond the volvulus, so that I could now easily replace the small intestines. At this stage the patient became much worse; the pulse could scarcely be felt. Brandy was given hypodermically and the abdomen was closed as rapidly as possible as I thought that the patient would not live long enough for me to complete the operation. The operation having been completed hypodermic injections of brandy and strychnia were given. After two or three hours she greatly improved and she swallowed a little brandy by the mouth. As she complained of great pain one-sixth of a grain of morphia was given hypodermically. Six hours after the operation she passed flatus and some urine. The temperature was 101·6°F. and the pulse was 152. On Jan. 27th the pulse was 120 and the temperature was 98·6°. After this the temperature was normal until Feb. 12th, when it suddenly went up to 103°; this was associated with some shivering and pain in the body which only lasted a few hours. After this the temperature was normal. The pulse gradually diminished in frequency. The bowels were at first well opened by means of saline purgatives and enemata. The patient got up on Feb. 27th and subsequently she made a rapid convalescence.

CASE 5. *Volvulus of the small intestine; operation; gangrene of volvulus; removal of gangrenous bowel and subsequent*

suture of the bowel; recovery.—The patient, a woman, aged 32 years, was under the care of Mr. Woods and Mr. Keighley of Batley. I saw her with them on June 9th, 1897, at 1 A.M., and operated soon after. The patient had been confined three weeks ago and was doing well; she had got up on the tenth day for a short time. On June 3rd, in the middle of the day, she had been suddenly seized with intense pain in the body and signs of intestinal obstruction developed later. On the 4th she had been seen by a consulting surgeon who ordered her small doses of belladonna and enemata. He saw her the next day and found her condition much improved; the bowels had been opened three or four times and the body was less distended. A few hours later she had become much worse, vomiting being incessant, and the distension of the abdomen becoming more marked. The symptoms of intestinal obstruction had increased in severity until I saw her. She was then very ill; the pulse was 150 and feeble, and the hands were getting cold but not moist. She was vomiting frequently; the vomit was very foul-smelling. The tongue was furred and moist. The abdomen was greatly distended and not moving with respiration. Coils of intestine could be seen and felt to move. She complained of great pain and there was a good deal of tenderness over the lower part of the abdomen.

At 1.30 A.M. I proceeded to operate. Ether was given by Mr. Woods and Mr. Keighley assisted. An incision about four inches in length was made in the middle line below the umbilicus. There was a good deal of bleeding from the abdominal wall. On opening the peritoneal cavity three or four ounces of foul-smelling red-coloured fluid escaped. On introducing the hand coils of small intestine were found matted together in the umbilical and hypogastric regions and in the pelvis. Some of the coils were adherent to the pelvic organs. The uterus was large. On looking into the peritoneal cavity some coils of intestine were noticed to be of a dark purple colour; these were pulled outside and were found to be a volvulus of the small intestine about 14 inches long. This portion of the bowel was distended but had not altogether lost its polish; it was almost everywhere adherent by soft adhesions to the surrounding small intestines which were also distended. The volvulus was untwisted and separated from the small intestines to which it was attached; gas passed freely out of the volvulus. The bowel was twisted rather more than a complete turn from right to left on its mesenteric axis and was hanging downwards; it was deeply grooved at the point of constriction. At this stage artificial respiration had to be resorted to and hypodermic injections of ether and brandy had to be administered; after some minutes the patient again breathed. The operation was rapidly concluded, more blood-stained offensive fluid was removed from the pelvis, and a Bantock's tube was inserted. The wound was closed except about an inch of the lowest part; the volvulus was placed as near this opening as possible. The operation lasted about 30 minutes. After the operation the patient soon became conscious and she vomited twice.

On June 9th, at 4 P.M., the bowels acted. The motion was very offensive. The patient felt sick, but she did not vomit. Abdominal distension was very marked. The pulse was 140 and the temperature was 104° F. The patient was in a very critical condition after the operation. On the 11th the temperature was 100° and the pulse was 104. The bowels were opened after a simple enema. Feeding was conducted entirely by nutrient enemata. The bladder was emptied by catheter. The wound was dressed and iodoform which had been used was discontinued, as the patient had some eczema of the body, arms, and legs, probably due to the drug. This completely cleared up in about 10 days. The Bantock's tube which had been emptied at frequent intervals was now removed as the discharge had greatly diminished in quantity. The patient now complained of great pain and swelling of the right leg and it was found that she had thrombosis of the femoral vein. On the 12th, at 8 A.M., the abdominal distension was quite gone. The patient was passing flatus freely. There was more pain in the leg and it was much more swollen. At 8 P.M. the patient was very restless and she complained of pain in the abdomen; an offensive discharge had come through the dressing. A simple enema was given with a good result. After this the patient slept for an hour and then woke up feeling hot and restless. The pulse was 140, the temperature was 102·4°, and the respiration was 36. The wound was dressed at midnight; the discharge was fæcal and large in quantity. Some portion of the volvulus had evidently given way. The wound was dressed every two hours. On the 13th the patient was much better and she passed urine naturally. On the 14th feeding by the mouth was commenced and the rectal feeding was gradually diminished. The bowels were opened daily by simple enemata. On the 22nd an offensive slough was noticed to protrude from the lower part of the wound. On the 24th I pulled on this and removed a slough about a foot long which consisted of small intestine greatly decomposed, evidently the whole of the volvulus. The patient was now entirely fed by the mouth. The pain and swelling in the leg were much less. On July 4th the patient got up for an hour. After this she continued to recover, getting up every day. On August 7th she was admitted to a surgical home in Leeds to have an operation performed for the restoration of the continuity of the bowel. During the past three weeks she had been getting up and going out every day. Most of the motion was discharged through the fistulous opening; two or three times some motions had been passed per rectum. The patient had had three attacks of obstruction, as the fistulous opening became almost closed; these attacks had been associated with great pain and vomiting. On dilating the fistulous tract relief had soon been obtained with copious discharge of motion. After admission to the "Home" she was very well until early in the morning of August 9th. I was called to see her at 5 A.M. She was then suffering from great pain in the body and was very collapsed. The abdomen was distended and the temperature was 101·6°. During the preceding 24 hours very little had been discharged through the fistulous opening. After some difficulty a No. 12 rubber catheter was passed into the bowel through the sinus and after that some fluid contents escaped. The sinus was an inch in length before it opened into the bowel and it appeared that this opening had practically closed. One-sixth of a grain of morphia was given hypodermically. After this the patient was greatly relieved and had the bowels well moved through the fistula.

On August 11th, at 9.15 A.M., the operation was commenced. The pulse just before operation was 120, and the temperature was 100·4°. Ether was given by Mr. Dixon. I was assisted by Mr. Walter Thompson and Mr. F. Talbot. An incision about three inches long was made in the middle line above the old scar, and the abdomen was opened. This exposed the omentum which was adherent to the viscera about the old incision. The finger was then passed inside the abdomen to the left of the sinus and it was found that the adhesions only extended for a short distance from the middle line. The area of adhesion around the sinus to the abdominal wall appeared to be a circle about two inches in diameter. The incision was now continued downwards on either side of the external orifice of the sinus so that this was isolated from the abdominal wall, and the incision was continued through the abdominal wall in the middle line for three inches below this. The portion of omentum attached to the viscera near the cicatrix was transfixed in six places and ligatured with fine silk and divided. This enabled me to make a complete examination of the parts. It was now found that several coils of intestine were adherent together and one coil was adherent to the top of the uterus. These adhesions were separated by means of a blunt dissector and the finger; one or two vessels were ligatured. Free access to the parts was thus obtained. About six inches above the fistulous opening and the same distance below the bowel was surrounded by means of a piece of indiarubber tubing. The fistulous track and the portion of skin surrounding the orifice which had previously been separated were now carefully dissected out and removed. At one end of the fistula a small opening into the upper part of the bowel was found. This portion of bowel was greatly distended and there was some active peritonitis and actually some yellow flakes of lymph between some of the coils; at the other end of the fistula a small opening was found communicating with the lower portion of the bowel. The edges of the bowel were now pared. The portion of bowel below the fistula was much contracted. To make the openings of equal size the lower one was enlarged by dividing all the coats for a short distance at a point of the opening directly opposite the mesenteric attachment. The edges of the bowel were now stitched together by means of two continuous fine silk sutures, each going half-way round the circumference, beginning and terminating by a knot, all the coats of the bowel with the exception of the mucosa being included in the suture. Two or three sutures now close the gap in the

mesentery. The sponges were removed and the omentum was brought down to cover the parts. The abdominal wound was closed. The operation lasted one hour and a half. The patient was very collapsed at the end; the pulse was 180. An injection of strychnia and brandy was given as well as an enema of brandy and water. The patient made a good recovery. She was fed by nutrient enemata for five days and after that by the mouth. The bladder was emptied by catheter for five or six days. The bowels were opened by a simple enema on the 21st and after that every day by means of enemata. A small stitch abscess formed which was opened on the 19th. The patient got up at the end of three weeks and made very rapid progress. The temperature, which was 100° at the time of the operation, varied between 100° and 101° for two or three days; after that it was normal, with the exception of a rise on the 26th and 27th, when it reached 102°. I received the following letter from Mr. Woods a few days ago: "Mrs. —— was prematurely confined at the end of seventh month of twin boys on July 22nd, 1898. The elder died on July 31st, the younger on August 2nd. At the present time the patient expresses herself as being in perfect health and quite able to do her household duties. She feels as well as ever she did."

CASE 6. *Volvulus of small intestine; operation; death.*—The patient, a man, aged 53 years, was under the care of Mr. Griesbach of Garforth. I saw him at 8 P.M. on May 4th, 1898, and operated on May 5th at 9.30 A.M. The patient had been first seen by Mr. Griesbach on April 29th. He had then complained of vomiting and pain in the body and there was some distension. On the next day the bowels had been opened, but no flatus passed. After the first day there had been no vomiting. The body had become more distended and tender. The temperature did not rise above the normal. The pulse had gradually increased in frequency and when I saw him it was 130. His hands and face were then pinched but not cold. The abdomen was distended and everywhere resonant; the distension was most marked on the left side. No tumour could be felt. Distended coils of intestine could be seen but there was no peristalsis visible. Nutrient enemata with strychnia were given during the night and on the next morning the condition of the patient was about the same.

Mr. Griesbach administered ether and my house-surgeon, Mr. F. Talbot, assisted me. The abdomen was opened through the left linea semilunaris; some blood-stained fluid escaped. Some greatly distended small intestines presented which were of a purplish colour; several of these coils were pulled outside and were surrounded by hot towels. It was now found to be a volvulus involving several feet of small intestine twisted from left to right on its mesenteric axis. This was untwisted. It appeared to have made rather more than one complete turn and at the point of twisting there was a deep ulcer in the mesentery around which were some flakes of purulent lymph. The mesentery was torn near the ulcer in untwisting it, this caused some delay in stitching up as a vein was perforated and only with difficulty was it secured. As the bowel appeared paralysed and the distension was not much diminished an incision was made into it and a Paul's tube was inserted; from this a large quantity of foul-smelling contents escaped. The volvulus could now be easily reduced. The abdominal wound was closed, fixing into it the portion of intestine into which the tube had been inserted. The operation lasted about an hour and the patient stood it well. He died on May 10th. For the first two or three days after the operation his condition had improved and he had appeared to be more comfortable; the pulse had improved in quality and had become less frequent. He had passed large quantities of flatus and the bowels had been well opened two or three times. At first large quantities of thin fæcal material had come through the tube, but afterwards it was thin, bile-stained fluid, from 10 to 12 ounces coming during the day. During the last 48 hours of life he had rapidly got worse, his hands becoming cold and blue, and there had been a good deal of twitching. The urine had been scanty and painful to pass. There was no post-mortem examination.

CASE 7. *Volvulus of the small intestine; tuberculous mesenteric glands and adhesions; operation; death.*—A man, aged 20 years, was admitted into the Leeds Infirmary under my care on March 15th, 1898. On March 13th at 3 A.M. he had been suddenly awakened by an acute pain in the abdomen, most marked about the umbilicus. Since then the pain had been more or less constant with paroxysmal exacerbations. The pain was less severe after passing flatus. He had commenced to vomit at about 7 A.M. The vomiting had been frequent, latterly becoming offensive. The bowels had not been opened since March 11th. Three or four enemata had been given. On admission the abdomen was found to be slightly distended, especially in the umbilical region. The abdominal walls were rigid and not moving with respiration. No tumour could be felt. There was no visible peristalsis. A doughy sensation in the pelvis was revealed on rectal examination.

The operation was carried out on March 16th at 10 A.M. Ether was administered. The abdomen was opened in the middle line by an incision three inches long below the umbilicus. There was some peritonitis. On introducing the hand into the peritoneal cavity the pelvis was found to be filled with collapsed small intestine. Above this were greatly distended bowels which were of a purplish colour. These were pulled outside the abdomen and protected with hot towels. They were found to be a volvulus, involving about two or three feet of small intestine completely twisted from left to right on its mesenteric axis. The mesentery forming the stalk of the volvulus was puckered and in it was found some enlarged and caseous glands; about two inches of small intestine were adherent to this. The volvulus was untwisted and then the adherent bowel was separated from the mesentery. In doing this a small tear was made into the bowel which was stitched up. The volvulus could be partly emptied, gas and liquid motion passing into the lower portion of the intestine. The abdominal wound was closed and a portion of the volvulus was secured to the lower end of the wound, so that it could if necessary be easily opened.

On March 17th, at 10 A.M., the patient was restless. There had been no vomiting since the operation. The pulse was 126 and the temperature was 99·6° F. At 3 P.M. the patient was delirious. There was no action of the bowels nor was any flatus passed. The face was flushed and dusky. At 6 P.M. the portion of bowel stretched to the lower part of the wound was opened and a small Paul's tube was inserted. At 11 P.M. the pulse was 136, the face was livid, and the patient was now quite maniacal and very restless. One-sixth of a grain of morphia was given hypodermically. There had been no flow of intestinal contents through the Paul's tube and no passage of flatus or motion per rectum. The patient had not vomited since the operation. He died at 4 A.M. on the 18th.

A post-mortem examination was made by Dr. T. Wardrop Griffith. On opening the abdominal cavity the small intestine was found to be immensely distended for rather more than half its course. The lower few feet of this formed a partially untwisted volvulus and presented dark semi-gangrenous patches; the artificial anus was made into the lower part of this portion of gut. The remaining small intestine, about four feet, was attached by puckered mesentery. The puckering was more marked at the upper portion of this part of the gut. Here the glands of the mesentery were indurated, being in part caseous and in part calcareous. A fold of sigmoid flexure was involved in these adhesions; other portions of the large gut were normal and contained large scybalous masses. The other organs were normal.

What strikes me most forcibly in seeing cases of intestinal obstruction is the difficulty in making a diagnosis and it is probably this very difficulty which fascinates one. I have to confess that out of the seven cases I only made a correct diagnosis in one; that was Case 2, and I made that with some reservation, as although the chief signs were present still the patient did not appear ill enough to warrant the diagnosis of such a grave condition. Case 1 we thought probably might be a case of perforated gastric ulcer. In the other cases there was so much general peritonitis and distension that I think the making of a correct diagnosis as to the actual cause of obstruction was well-nigh impossible. Volvulus of the small intestine is considered a very rare condition unless some cases of transient acute obstruction which readily clear up are really cases of partial volvulus. Descriptions of actual cases demonstrated either on the operating table or in the post-mortem room are certainly very rare. Mr. Thorburn has a very valuable paper on this subject in the *Manchester Medical Chronicle* for June, 1898, with a record of three cases, one of which is an undoubted case of volvulus, and I agree with him in thinking that a volvulus is the best explanation of the other cases. Case 5 suggests that the disarrangement of the bowels which must sometimes follow

on the emptying of the gravid uterus may be the starting of a volvulus of the small intestine. The sudden onset in this case may have been caused by the patient assuming the upright position. I have thought that if the symptoms in this case had commenced a few days after the confinement a diagnosis of post-puerperal septic peritonitis might have been made, and if this is a reasonable suggestion it is possible that there are cases which are diagnosed and certified as post-puerperal peritonitis which are really cases of twisting of the bowels and that the peritoneum is infected from the intestine and not from the uterus. It is also more than probable that the correct explanation of some of the fatal cases of peritonitis occurring after ovariotomy and other similar operations may be that the infecting organism comes from a twisted or kinked bowel. Dr. Donald's case quoted by Mr. Thorburn supports this view—a case in which there was found, sharply defined, gangrene of five feet of ileum 35 hours after a simple ovariotomy—and I imagine that most operators must have seen cases of peritonitis after ovariotomy in which they have suspected that the infection has been derived from the intestinal tract. As to the causation of volvulus, in the large intestine a long mesentery appears necessary for its production. The normal length of the mesentery of the small intestine would seem to be favourable for the production of a volvulus, the small intestine being as it were suspended by its mesentery. In none of the cases did previous constipation apparently play any causative part—in fact, it was quite curious to note that in the cases of volvulus of the large intestine there were no hardened fæces, the contents being gaseous and liquid. In some of the cases visible peristalsis was noted. I am inclined to think that this movement occurred in the bowel above the twist and not in the volvulus itself. It appears to me that peristalsis is not likely to occur in the twisted gut.

The treatment of the volvulus adopted varied in the different cases. In Case 1 the volvulus was simply reduced after letting out the gas. In Cases 2 and 4 the anus was dilated and the contents of the volvulus and colon were squeezed out without opening the bowel, the after-treatment consisting of the administration of saline purgatives and washing out the bowel. Both these cases recovered. In Case 3 the contents of the volvulus were evacuated after incision. In Case 5 the volvulus was simply untwisted and the pelvis was drained. The volvulus subsequently becoming gangrenous was then removed and later the intestinal continuity was restored. In Cases 6 and 7 the intestine was opened and a Paul's tube was inserted in the coil, in the former case at the time of the operation and in the latter 24 hours after.

The mortality in cases of intestinal obstruction, whether from volvulus or from any other cause, is fortunately diminishing, and this is undoubtedly due to the fact that the profession is appreciating the great importance of early surgical interference in the large majority of cases of that condition.

Leeds.

DIPHTHERIA IN LONDON.—The first four weeks of the present year have witnessed in London a fall alike as to amount and fatality of diphtheria as compared with the four concluding weeks of 1898. In the December period in question there were 1045 notified cases, yielding a weekly average of 261, whilst in the January period only 959 notifications were made and the weekly average fell to 240 cases. In December two sanitary areas and in January one such area remained uninvaded. In December five districts had each upwards of 50 cases, 386 in all, and in January four districts had more than 50 cases each, an aggregate of 289, whilst four other invaded localities had only six cases between them. The registered deaths numbered 176, or 44 per week in the December period and caused a case rate of mortality of 16·8 per cent. In January the total mortality was only 125, or 31 weekly, and the case rate 13·0 per cent. These 125 deaths would have been 169 had the corrected decennial average been maintained for the corresponding weeks of the years 1889–96. In the Outer Circle the registered mortality was also much smaller in January than in December. In the earlier period 84 deaths, or 21 weekly, were recorded, of which 40 belonged to West Ham Registration District; in January only 57 deaths, or 14 weekly, were registered, of which 20 belonged to the West Ham area.

NOTES OF 84 CASES OF SYPHILIS TREATED BY THE INTRAVENOUS INJECTION OF CYANIDE OF MERCURY.

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DURING my term of house surgeon to the London Male Lock Hospital I had the opportunity of watching the effect of the various methods of treating syphilis and came to the conclusion that for hospital practice, for the more serious lesions, and for cases which can be seen daily, the intravenous injection of mercury was far superior to the other methods employed. I thought it might be interesting to give the notes of the cases I treated in this manner. It may be well before proceeding further to explain briefly the method of procedure. It is simple and with ordinary care is unattended with any special risks. The part of the arm where the injection is to be made is rendered aseptic by washing and swabbing over with a solution of carbolic acid. The veins of the forearm or the bend of the elbow are chosen as being the most prominent and easy to get at. A rubber tourniquet is applied to the upper part of the arm to make the veins stand out, and a fine needle of a hypodermic syringe containing 20 minims of a 1 per cent. solution of cyanide of mercury is introduced into the vein chosen, in the direction of the blood-stream. The operator knows when the needle is inside the vein by the sensation which is imparted to the syringe. The tourniquet is then removed, the fluid is injected into the vein, the needle is withdrawn, and an aseptic swab is applied with a small amount of pressure to the puncture for a few minutes. The injection is made every morning unless the patient complains of diarrhœa, which rarely happens, or unless there is some other contraindication. The injection is quite painless unless it has missed the vein when it causes acute pain and swelling. The pain and swelling can usually be reduced in a day or two by means of hot fomentations. Occasionally, however, the swelling persists for two or three weeks as an indurated nodule. In a small percentage of cases bruising of the tissues surrounding the vein occurs, due to slight extravasation of blood around the puncture, and can often be overcome by using a finer needle.

The advantages which are claimed for this line of treatment are—1. As the injection is made daily the patient is under constant observation. 2. The exact quantity of mercury introduced into the system is known. This is not the case when pills or inunctions are used. 3. As the drug is administered by intravenous injection the patient is rapidly brought under its influence (with greater rapidity than when administered by the mouth or skin) a marked advantage in cases where it is necessary to produce the full effect of the drug as speedily as possible, such as iritis, otorrhœa, bad ulcerative laryngitis, &c. 4. The rapidity with which serious lesions and visible evidences of the disease clear up. 5. The treatment by intravenous injection is especially useful in cases which have not responded to the ordinary methods of treatment, such as pills, inunctions, &c. In three cases, Nos. 22, 27, and 69, polyuria occurred for a few days. In two cases, Nos. 24 and 54, diarrhœa occurred, which was, however, easily kept under control by astringents and omitting injections for a few days. In two cases, Nos. 13 and 33, salivation occurred which was controlled by astringent washes and mouth hygiene. In three cases, Nos. 46, 59, and 74, there was a difficulty in making the veins sufficiently prominent. When the large number of cases dealt with is remembered these complications are scarcely worth mentioning, and can scarcely be called disadvantages especially as they were very slight and rapidly disappeared. Nine of the following cases are not classified, as the patients refused to be thus treated or were discharged for improper conduct. Cases of phimosis, where it was necessary to circumcise or to slit up the prepuce, healed rapidly, and in only one case, No. 30, did the wound thus formed indurate. The average stay in the hospital per case was 23·2 days. All the cases, with but one exception, No. 43, showed very marked and rapid improvement. It is not claimed that this method acted quite alone in producing these good results. In the worst cases other adjuvants were used such as cod-liver oil, iron, and a correct diet, and in all

SYNOPSIS OF 84 CASES OF SYPHILIS TREATED BY THE INTRAVENOUS INJECTION OF CYANIDE OF MERCURY.

Primary and Secondary Syphilis.

No.	Age in years.	Previous history.	Nature of lesions.	No. of injections.	Time.	Result.	Remarks.
1	20	—	Phimosis for 4 weeks; concealed chancre; fading macular syphilide; inguinal adenitis.	14	14 days.	Improved. +	Rash faded; phimosis reduced; sore healed.
2	20	Connexion 3 months ago.	Phimosis for 3 weeks; inguinal adenitis; papular eruption for 1 week.	27	30 days.	Improved. +	Sore healed; rash disappeared.
3	29	Chancre for 11 weeks; had had treatment with mercury (pills) but was getting worse.	Multiple sores at the frænum; chancre; meatus urinarius; adenitis, balanitis, and œdema; papular syphilide for 4 days.	24	28 days.	Improved. +	No symptoms present; sore healed; rash faded.
4	46	Chancre 5 months ago, 3 weeks after connexion; rash 2 weeks later.	Phimosis concealed sore; adenitis; syphilide on the arms, back, legs, &c.; condylomata ani (circumcision).	16	27 days.	Improved. +	On the twenty-seventh day all symptoms had disappeared. Until the twenty-first day veins would not stand out; inunction for 6 days every night.
5	33	Connexion 5 weeks before admission.	Chancre on the penis for 1 month; mass of enlarged glands; squamous syphilide of the face.	14	26 days.	Improved. +	Sore and bubo healed, spots faded, glands much reduced in size; oleate of mercury ointment applied to the glands.
6	21	Connexion 10 weeks before admission.	Urethral chancre; swelling and inflammation of the whole penis; profuse papular eruption, adenitis, anæmia, and alopecia.	26	29 days.	Improved. +	All symptoms of syphilis disappeared, sore healed, rash faded, and the penis normal.
	30	Connexion 4 weeks before admission.	Chancre on prepuce for 10 days; papular eruption; inguinal adenitis.	11	17 days.	Improved. +	Sore healed; rash disappeared.
8	30	Connexion 9 weeks ago.	Indurated coronal chancre for 8 weeks; profuse squamous eruption, pustulous in places, for 1 month; throat injected.	30	32 days.	Improved. +	Sore healed; spots nearly gone.
9	27	Connexion 4 weeks ago.	Sore appeared 3 days after connexion, when he applied $CaSO_4$; adenitis, papular syphilide, and alopecia.	13	38 days.	Improved. +	At the sixth injection, the teeth being loose, injections were discontinued for 3 weeks and then resumed; after 13 injections the spots faded; sore nearly healed; hair stopped coming out.
10	29	Coronal chancre for 2 months.	Indurated chancre; profuse papular syphilide 3 weeks; adenitis.	19	21 days.	Improved. +	Sore healed; spots nearly gone; took his own discharge.
11	18	Primary sore on the penis 5 months previously.	Sloughing prepuce for 6 weeks; condylomata scroti and in inguinal region; profuse macular eruption, annular round the mouth and nose.	14	15 days.	Improved. +	At the sixth injection condylomata ani disappeared; after fifteen injections no signs of syphilis were present.
12	21	—	Chancre on the penis for 3 months; profuse macular rash for 2 months; adenitis, double iritis, condylomata.	14	15 days.	Improved. +	At the eighth injection the sores healed; the iritis was cured; at the fourteenth all signs disappeared.
13	33	Intercourse 7 weeks previously.	Sores on the prepuce for 3 weeks; general squamous pustular eruption; adenitis.	18	30 days.	Improved. +	At the fifth injection the gums were badly touched; no injection for 10 days; during this time the rash faded. At the eighteenth injection the sore healed and the rash had faded.
14	18	—	Phimosis; concealed chancre; œdema scroti; marked macular eruption.	17	17 days.	Improved. +	At the twelfth injection the rash faded; at the seventeenth injection the sore healed.
15	27	Small sore 9 days after connexion 5 weeks ago.	Indurated sore of the glans; œdema of the penis; very profuse papular eruption.	21	21 days.	Improved. +	Sore almost healed; rash nearly gone; no other symptoms.
16	19	Connexion 4 months ago.	Remains of indurated chancre on the penis; ulcerated throat; squamo-papulo-pustular syphilide; adenitis; pains in the limbs.	21	26 days.	Improved. +	Pains have disappeared; rash faded; wards closed.
17	33	—	Indurated chancre on the glans for 6 weeks; adenitis; papular syphilide.	9	17 days.	Improved. +	Sore healed; spots fading; wards closed.
18	—	Sore on the penis; sore throat and mouth 1 year ago.	White patch on the tongue; adenitis; inguinal; small sore under the surface of the penis.	4	7 days.	Improved. +	Much better; wards closed.
19	22	—	Phimosis; concealed sore; adenitis; condylomata ani; ulcers on the tonsils.	13	15 days.	Improved. +	Circumcision; condylomata healed; throat well; circumcision wound healthy.
20	25	Has been treated with mercury; gums touched.	Coronal chancre; adenitis; throat injected.	8	9 days.	Improved. +	Sore healed.
21	41	Connexion 2 months previously.	Hard collar of induration around the corona; inguinal and post-mastoid adenitis.	14	17 days.	Improved. +	All the symptoms disappeared.
22	19	Connexion 8 weeks previously.	Phimosis; concealed chancre; adenitis; profuse erythema.	20	20 days.	Improved. +	Complained of polyuria; there was no albumin. The rash had nearly gone; circumcision.

SYNOPSIS OF 84 CASES OF SYPHILIS TREATED BY THE INTRAVENOUS INJECTION OF CYANIDE OF MERCURY—(*Continued*).

Primary and Secondary Syphilis—(Continued).

No.	Age in years.	Previous history.	Nature of lesions.	No. of injections.	Time.	Result.	Remarks.
23	36	Sore on the penis 4 months ago.	Maculo-squamous syphilide; rupia; throat congested.	13	14 days.	Improved. +	Spots fading; throat well; wards to be closed.
24	19		Sloughing of the prepuce; mass of enlarged glands in the groin breaking down; maculo-papular syphilide.	13	17 days.	Improved. +	At the seventh injection diarrhœa occurred and it was omitted for 2 days. Circumcision; groin scraped. At the tenth injection the spots had gone.
25	36	—	Phimosis; chancre on the prepuce; adenitis; profuse papular eruption.	28	30 days.	Improved. +	Circumcision; spots disappearing. Circumcision wound healed.
26	17	—	Phimosis; papular syphilide; adenitis; tonsils ulcerated; circumcision.	32	33 days.	Improved. +	At the tenth injection the rash was fading. Circumcision wound healed. At the thirty-second injection the rash had gone.
27	34	—	Sloughing sore on the glans; adenitis; profuse roseola.	37	40 days.	Improved. +	Rash faded; sore nearly well; complains of polyuria at night; there was no albuminuria in the urine.
28	42	Connexion 6 weeks previously.	Sloughing indurated sore under the surface of the glans and prepuce; adenitis; papulo-macular eruption; throat ulcerated.	10	11 days.	Improved. +	Throat well; sore much better; looks healthy; wards to be closed.
29	29	Connexion 2 weeks previously.	Sloughing sore on the scrotum for 2 months; sore on the penis for 2 weeks; adenitis.	12	17 days.	Improved. +	Sores on the scrotum; penis looked very healthy and nearly healed; wards to be closed.
30	18	—	Inflamed phimosis; circumcision; the scar indurated; roseola; inguinal adenitis.	7	26 days.	Improved. +	The circumcision wound healed; eruption faded; induration subsided.
31	26	Connexion 8 weeks previously.	Indurated chancre 2 weeks; adenitis; profuse macular eruption; throat congested.	9	10 days.	Improved. +	Rash almost disappeared; sore nearly healed; own discharge.
32	31	Connexion 9 weeks previously.	Phimosis; concealed chancre; adenitis; roseola.	8	9 days.	-	Rash gone.
33	25	Had been treated with mercury for 5 weeks.	Phimosis; concealed sore; profuse general papulo-macular syphilide; adenitis; circumcision.	12	20 days.	Improved.	At the twelfth injection the gums touched, inunction for last 3 days; most of rash faded; own discharge.
34	21	Primary sore for 10 weeks.	Phimosis; concealed sores; adenitis; macular eruption; condylomata ani.	8	8 days.	Improved.	Own discharge.
35	30	Chancre for 4 weeks.	Phimosis; ulceration of the prepuce; papular rash; adenitis; slit up.	18	19 days.	Improved. +	Rash faded; sores healed; penis which was very filthy was now normal.
36	24	Last connexion 4 weeks previously.	Phimosis for 3 weeks; indurated chancre on the prepuce; general pustular eruption.	7	14 days.	—	Own discharge.
37	—	Connexion 2 months previously.	Phimosis; circumcision; indurated sores at the frænum; adenitis; roseola.	12	20 days.	Improved. +	Sore healed; rash faded; circumcision wound healed.
38	22	—	Two indurated sores under the surface of the prepuce; profuse eruption on body; buboes in the groin.	26	39 days.	Improved. +	Sores healed, as had also buboes; rash disappeared.
39	21	Last connexion 4 weeks previously.	Indurated chancre; adenitis; erythema; anæmia; sore throat.	13	14 days.	Improved. +	At the fifth injection the rash faded; at the thirteenth injection the sore healed. The glands were much smaller.
40	26	Primary sore for 3 months.	Ulceration and condylomata of the left tonsil; papular syphilide.	14	14 days.	Improved. +	At the eighth injection ulceration and condylomata of the tonsil healed; rash disappeared.
41	35	—	Large indurated chancre on the prepuce; adenitis; macular syphilide; congested throat.	12	12 days.	Improved. +	Rash much fainter; sore nearly healed; looked healthy; own discharge.
42	26	Sore on the prepuce for 8 weeks.	Chancre indurated on the prepuce; adenitis; profuse maculo-papular rash.	24	28 days.	Improved. +	At the seventh injection the rash was fading; at the twenty-fourth injection the rash was almost gone; the sore healed; own discharge.
43	26	Sore for 4 weeks.	Indurated chancre; adenitis; macular syphilide.	10	11 days.	- +	At the third injection the rash was fading; at the seventh injection the rash had become well marked, again deeper in colour, and more profuse; sore healed. At the eleventh injection the rash faded.
44	26	Phimosis slit up 3 months ago, not healed.	Granulating wound of the prepuce; inguinal and cervical adenitis; macular, circular, and scaly eruption; seborrhœa.	22	31 days.	Improved. +	At the fourteenth injection the spots had all disappeared; the penis almost healed. Iodide of soda internally. Discharged for breaking the rules of the hospital.
45A	43	Phimosis for 4 weeks, concealed sore for 6 weeks.	Phimosis sore; adenitis; profuse papular syphilide.	34	46 days.	Improved. +	Sore healed; rash nearly gone; a few scattered papules remain chiefly on the face.
45B	—	Readmitted 25 days later; had been taking mercury pills.	Ulceration of the hard palate; a few papules on the face.	10	14 days.	Improved. +	Iodide of soda mixture internally as well as injections; very much better; wards to be closed.
46	27	Chancre on the penis and rash six months ago.	Ulceration of the inside of the mouth and tonsils; fading rash.	5	29 days.	—	Veins not evident, so was treated with mercurial inunctions.

SYNOPSIS OF 84 CASES OF SYPHILIS TREATED BY THE INTRAVENOUS INJECTION OF CYANIDE OF MERCURY—(*Continued*).

Secondary Syphilis in which the Primary Sore had Healed before Admission to Hospital.

No.	Age in years.	Previous history.	Nature of lesions.	No. of injections.	Time.	Result.	Remarks.
47	53	Sore on the penis 8 weeks, followed by secondaries; had been treated with mercury; gums touched. Had had dysentery in India.	Desquamating syphilide on the back, neck, head, and arms.	30	33 days.	Improved.	Blood and mucus per rectum after the fourth injection. Iodide of soda internally after the twenty-fourth injection.
48	—	None obtainable.	Phimosis; concealed chancre; adenitis; condylomata ani at umbilici; plaques on tonsils; papulo-squamous syphilide.	15	18 days.	Improved. +	After the fourteenth injection there was marked improvement, only a few spots being present; condylomata healed; phimosis reduced; no sore present.
49	25	Chancre on the penis 2 months ago healed.	Adenitis; papulo-squamous syphilide on the trunk, arms, and legs; mucous patches in the mouth.	14	36 days.	+	A few scattered spots remain; adenitis reduced; mouth well.
50	18	Chancre on the penis 5 months ago.	Profuse general squamous syphilide; inguinal and cervical adenitis; throat injected.	36	37 days.	Improved. +	Slight staining left; no other symptom; very bad case.
51	20		Phimosis; œdema of the penis and scrotum for 3 weeks; condylomata ani; syphilitic ulceration of the left middle finger nail; destroyed bone exposed.	48	61 days.	Improved. +	All visible signs of syphilis disappeared after 10 injections; œdema persisted; he was circumcised after the twenty-sixth injection; wound healed rapidly.
52	25	Intercourse 5 months ago; no sore now present.	Phimosis and œdema of the penis; condylomata ani et scroti; plaques in mouth and tonsils; adenitis.	15	19 days.	Improved. +	At the ninth injection the condylomata healed; at the fifteenth injection there were no signs of syphilis.
53	—	Sore on the penis had healed 14 days before admission.	Sore on the penis had broken out again and indurated; profuse macular eruption; adenitis; pains in the head.	7	8 days.	Improved. +	At the fifth injection the sore healed; the rash was fading. At the eighth injection the throat was well; the rash had faded.
54	19	Intercourse 3 months ago; has had treatment in the infirmary.	Phimosis; concealed chancre; adenitis; profuse maculo-squamous eruption in the throat.	5	5 days.	Improved. –	Diarrhœa occurred at the fifth injection; he then had inunction. The rash had faded considerably. Discharged at own request.
55	24	Chancre and rash 6 months ago.	Otorrhœa; ulceration round the left ear and on the head; squamous syphilide on the right shoulder and chest; tonsils ulcerated.	22	22 days.	Improved. +	At the ninth injection discharge from the ear had ceased. The ulceration around the ear and on the head had healed.
56	27	—	Condylomata scroti and remains of indurated sore; gonorrhœal rheumatism.	22	22 days.	Improved. +	At the seventh injection condylomata and sore had healed. At the twenty-second injection no sign of syphilis was present.
57	33	Primary chancre 6 months ago.	Ulceration of the forehead, cheek, chin, and ear; also of the throat.	17	18 days.	Improved. +	Ulceration nearly healed; throat quite well. Sodium iodide was given internally. Discharged for insolence.
58	20	Chancre 6 months ago treated for 9 weeks; has had an extensive sore on the penis.	Large ulcerating rapidly-increasing mass on the dorsum of the penis; adenitis; broken-down gumma in the left scapular region.	16	16 days.	Improved. +	After the seventh injection iodide of soda was given internally; sore was healing up. After the twelfth injection the gumma healed. After the sixteenth injection ulceration had completely healed.
59	21	Primary sore 13 months ago treated off and on.	Sore under the surface of the penis 1 year; pigmented squamous syphilide legs.	4	13 days.	—	The veins were hard to find; inunction was used; there was considerable improvement. Wards to be closed.
60	—	Primary sore 1 year ago.	Squamous syphilide on the penis, papular on the legs; periostitis of both tibiæ.	13	18 days.	—	Iodide of soda was given internally; an iodide rash appeared on the seventh day. At the eleventh injection the veins were hard to find. There was great improvement.
61	23	Sore on the penis 13 months ago, followed by profuse general eruption; discharged from Netley Hospital.	Psoriasis, like patches on both arms, back, and right leg, partly covered by scab and ulcerated. There was considerable thickening of the tissues.	27	29 days.	Improved. +	The patches had lost most of their thickening and scabs. Nearly all the colour was gone. Discharged at his own request.
			Rupia.				
62	45	Primary chancre 7 months ago.	Rupial spots on the thighs and arms for 6 months.	12	13 days.	Improved. +	Spots have entirely healed and are losing colour; ointment of red oxide of mercury was given for the spots.
63	20	Primary 5 months ago.	Rupial spots on both legs and shoulders, right arm, and left eyelid.	27	27 days.	Improved. +	All the rupial spots have entirely healed, leaving coppery coloured scars. Iodides were given internally and oleate of mercury ointment was applied to the spots.
64	23	Had had treatment for the last 3 months.	Rupia on the legs, nose, forehead, and scalp; ulceration of the throat; œdema of the left leg; general health bad.	7	18 days.	Improved. +	Cod-liver oil and iodides were given internally. By the ninth day the crusts had fallen off. Swelling of the face and leg had gone. His general health was much better. The veins were hard to find. Mercury was given by inunction.

SYNOPSIS OF 84 CASES OF SYPHILIS TREATED BY THE INTRAVENOUS INJECTION OF CYANIDE OF MERCURY—(*Continued*).

Rupia—(Continued).

No.	Age in years.	Previous history.	Nature of lesions.	No. of injections.	Time.	Result.	Remarks.
65	25	Primary 3 years ago.	Remains of rupia on the back, right arm, and leg.	8	23 days.	Improved. +	Spots were healthy only pigmented; the veins were hard to find. Mercury was given by inunction.
66	60	Connexion 5 months ago.	Rupia for 3 months covering nearly the whole body, varying in size from a pea to a penny.	57	73 days.	Improved. +	Solution of perchloride of mercury was given in bath. At the fourteenth injection he was much improved; the crusts separated. On the nineteenth day iritis appeared which cleared up in a few days. At the forty-ninth injection there were no crusts; the spots were slightly coppery in colour. Very bad case.
67	28	Primary sore 18 months ago.	Rupia on the arms, back, legs, and chest; periostitis of the right knee and ulna and left third metacarpal bone. Very bad case; could not walk or stand alone. Marasmus.	47	62 days.	Improved. +	At the twenty-fourth injection the periostitis cleared up, leaving slight enlargement of the right knee; rupia healed and was losing colour; cod-liver oil and iodides were given internally. The patient gained 3 st. in 62 days.
			Tertiary Lesions.				
68	33	Primary 15 years ago.	Tertiary ulceration of the scrotum; cutaneous gumma on the left thigh; septum nasi partially destroyed.	12	20 days.	Improved. +	The ulceration healed and the gumma disappeared; iodides were given internally.
69	27	Primary 11 months ago.	Gumma of the pharynx and of the scalp; tertiary ulceration of the right eyelid and eyebrow.	40	41 days.	Improved. +	Polyuria after the first few injections, but soon passed off; at the twenty-third injection the gummata had quite healed; sodium iodide mixture was given.
70	39	Primary 4 years ago.	Tertiary ulceration of the face and pharynx; necrosis of the upper jaw.	21	28 days.	Improved. +	Iodides were given internally; there was some diarrhœa. The ulceration had quite healed; there was no discharge from the jaw.
71	—	Primary 2 years ago.	Broken down gumma of the right tibia; old pigmented ulceration of both legs; psoriasis of the right forearm.	6	7 days.	Improved. +	Iodide of sodium was given. The ulceration became much improved.
72	23	Primary 3 years ago.	Gummatous ulceration of the inner side of the lower half of the right and left leg on and off 3 years.	7	9 days.	Improved. +	Iodide of sodium was exhibited. The gumma very quickly healed. The patient refused further treatment.
73A	25	Primary 18 years ago in India.	Gumma of the leg; syphilitic testes.	7	10 days.	Improved. +	Iodide of sodium was given. Considerable improvement. Wards to be closed.
73B	—	Re-admitted 16 days later; he had not been taking any medicine.	Periostitis of the right tibia, pain in the knees, ulceration of the throat and face.	11	25 days.	Improved. +	The ulceration had quite healed. The throat was well and the periostitis was gone. At the eleventh injection the vein was missed so he was given mercury by inunction and iodide of sodium and cod-liver oil.
74	34	Primary 7 years ago.	Chronic superficial glossitis (syphilitic).	3	27 days.	Improved.	The veins were not evident.
75	27	Primary 16 months ago.	Tertiary synovitis of both knees and ankles; throat ulcerated.	11	35 days.	Improved. +	Iodides were given internally; all the symptoms disappeared.
			Cases not Classed who Refused Treatment or Absconded.				
76	34	—	Indurated chancre for 8 weeks; adenitis; squamous syphilide.	1	2 days.	—	The patient refused treatment.
77	22	—	Large sore on the prepuce covered by a white membrane; adenitis; profuse macular rash and lichen.	11	11 days.	—	Refused to stay in hospital; sore healing; spots fading.
78	22	Connexion (last) 2 weeks ago; rash appeared 21 days after admission.	Phimosis; concealed sore; adenitis; squamous syphilide; injections 21 days after admission.	8	28 days.	—	Circumcision was performed; the sores healed; the spots were fading; patient refused further treatment.
79	17	—	Phimosis; concealed sore; adenitis; condylomata ani.	6	7 days.	—	The patient refused treatment; absconded.
80	19	Has been treated with mercury in the out-patient department.	Phimosis; sores on the penis for 4 weeks; adenitis.	11	15 days.	—	Circumcision was performed; the patient refused treatment.
81	28	Chancre 12 months ago.	Macular syphilide on body; ulcers on tonsils.	14	14 days.	—	The patient refused treatment; discharged for insolence; the spots were fading.
82	30	—	Indurated chancre on the prepuce for 4 weeks; adenitis; macular syphilide on body.	3	4 days.	—	The patient absconded.
83	27	Primary sore 6 months ago, followed by rash.	Adenitis on both groins; papulo-squamous syphilide; ulceration of the tongue and tonsils.	3	4 days.	—	The patient refused treatment.
84	21	Sores on the penis for the last 2 months.	Indurated chancres; adenitis; profuse papulo-macular eruption; tonsils ulcerated.	4	5 days.	—	The patient refused to stay in hospital.

cases special attention was paid to the general health of the patient. In the tertiary and in some of the rupial cases the iodides of sodium and ammonium were used. All cases on being discharged from the wards were advised to undergo a further and prolonged course of the usual treatment in the out-patient department of the hospital. The cases are classified in the accompanying table as (1) primary and secondary lesions; (2) secondary lesions; (3) rupia; (4) tertiary lesions; and (5) cases not classified.

The patients whose cases I have described received their treatment in the wards of Mr. J. Ernest Lane and I have to thank him for his kind permission to publish the notes of the cases.

Colchester.

A CASE OF INTRINSIC CANCER OF THE LARYNX; TOTAL LARYNGECTOMY; RECOVERY.

BY J. W. LEECH, M.D., B.S. DURH.,

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A MAN, aged 57 years, single, consulted me on Oct. 11th, 1898, complaining of pain in the throat, accompanied by loss of voice and difficulty of swallowing of five months' duration. The history of the case was as follows. The patient who is a fine, muscular, healthy-looking man complained in March, 1898, of gradual failure of voice unaccompanied by pain. In June he complained of a constant dull aching pain which was at times intensified but was always strictly localised in the larynx. About this time the failure of phonation was complete and a month later dysphagia was a marked symptom. He had also very distressing dyspnœa on exertion, but this symptom, together with a violent paroxysmal cough which was induced by swallowing liquids or solids, did not trouble him until shortly before he consulted me. While under my observation he began to expectorate after his attacks of coughing a small quantity of thick glairy mucous stained with bright blood which on microscopical examination gave no indication of the grave nature of his complaint. He was slowly losing flesh. On making a laryngoscopical examination when I first saw him the cords were seen to be fairly mobile and somewhat congested but no nodule was present; this, together with his complaint of a constant sense of dryness in the throat, made me somewhat doubtful about diagnosing what his other symptoms decidedly suggested—viz., malignant disease of the larynx. A fortnight later on again examining the cords a small pearly white nodule was seen in the middle of the right cord, while in a corresponding position on the other cord a smaller nodule was just discernible. The cords, which were markedly hyperæmic, were not so mobile as when seen on the previous occasion, the right cord being the more fixed. His symptoms meanwhile had been progressively growing worse, particularly the dyspnœa, which was most distressing on the slightest exertion. He had lost more flesh and was very anæmic. There was a total absence of any sign of glandular involvement and the larynx was freely moveable. There was no venereal history. His mother had died from malignant disease of the rectum. The diagnosis was now quite simple and, having informed him of the grave nature of his disease, of the only treatment at all likely to benefit him, and of the tremendous risk of the operation as shown by the statistics quoted by Jacobson and others, he elected after some consideration to have it performed. Before proceeding with an operation of such gravity as laryngectomy I submitted the case to my friend and former teacher, Professor Arnison, who quite confirmed my views.

The operation of tracheotomy and exploration was performed on Nov. 6th. Dr. W. D. Arnison administered chloroform and with the assistance of Professor Arnison who had kindly offered to help, I made an incision in the median line about half an inch above the upper border of the sternum right down to the trachea which was seized and pulled up. After opening the wind-pipe a Trendelenburg's tampon-tube was inserted and the tampon was freely inflated. The incision was carried upwards to the level of the hyoid bone and was opened until the larynx was well exposed. An incision was made into the crico-thyroid membrane and the thyroid, which was considerably calcified, was snipped through with a stout pair of scissors. On drawing asunder the halves of the thyroid the growth was seen to be more extensive than had been at first supposed. It was seen to involve the whole larynx and to extend downwards for some distance. To ascertain its exact extent the cricoid cartilage and the upper three rings of the trachea were snipped through, in the course of which the isthmus of the thyroid glands was divided, but with very little hæmorrhage. The extensive origin of the growth was then clearly visible. The disease was seen to be more extensive on the right side, extending as a somewhat flat, dark-red, irregularly granular mass of very friable consistence from the whole of the under surface and part of the margin of the right cord across the upper part of the crico-thyroid membrane to the posterior portion of the left cartilage and cord; below it implicated the whole of the right and posterior surfaces of the cricoid and also the upper two rings of the trachea on the right side only, where the growth was very prominent, and projected into the lumen of the tube for about three-eighths of an inch, causing some occlusion. At this stage, as the patient's breathing which was not at any period of the operation very good became rather critical and as he showed marked symptoms of collapse, it was deemed advisable, seeing that nothing but total extirpation could afford any hope of benefit, to postpone further interference. The wound was then closed with superficial silkworm gut sutures and was dressed and the patient was put to bed. Steam impregnated with oil of eucalyptus was sprayed over the wound and hot flat sponges were applied continuously till the more serious operation. Trendelenburg's tampon-tube which was left in the trachea was replaced in 24 hours by an ordinary Durham's tube. On being put to bed the patient speedily responded to stimulative treatment and the improvement in his general condition was most marked. So greatly had the tracheotomy relieved the dyspnœa and the cough that he was enabled to sleep for several hours every night and to partake of nourishment by the mouth without inconvenience. The exploratory wound healed up well and there was an entire absence of chest complications.

On Nov. 17th the operation of total laryngectomy was performed. Dr. W. D. Arnison administered chloroform and Mr. N. C. Bailes and Mr. T. S. Parkinson assisted. I reinserted Trendelenburg's tampon-tube into the trachea and freely dilated the tampon. The exploratory incision was then reopened and another incision was carried outwards at right angles to this for three inches on either side at the level of the lower border of the thyroid cartilage. This incision was deepened, no muscle other than the platysma being divided until the larynx could with the aid of retractors be freely exposed. An incision in the middle line was then made and the larynx was re-opened, a couple of small sponges secured by silk and artery forceps being packed above the tampon. The perichondrium and its muscular attachments were then carefully dissected off in front and laterally with a raspatory, the alæ were separated from their connexions, and the thyro-hyoid membrane was cut through together with the thyro-epiglottidean and the aryteno-epiglottidean folds. The epiglottis was left moored by its hyo-epiglottidean fold. The cricoid was detached from the trachea, through the sides of which silk sutures were passed and held in position by artery forceps. Having carefully cleared the cricoid in front and laterally it was seized by a pair of vulsellum forceps and pulled forwards and upwards while it was carefully separated from the œsophagus. The dissection was continued upwards till the cricoid was freed, then the two cartilages were removed, not quite *en masse*, for owing to the calcification they were very brittle and they constantly broke in the grip of the forceps. As the first two rings in the trachea were considerably diseased, which was afterwards fully confirmed microscopically, the upper three rings were next removed. The hæmorrhage, which was never excessive, was easily controlled; indeed, no vessels were tied and only four vessels required twisting. The loose tissues in front of the exposed part of the œsophagus were then freely dissected off until the muscular fibres of that tube were clearly visible. All oozing was arrested by free mopping with hot carbolic lotion of one in 60. The cavity was next sprayed out with listerine and then with a little iodoform. The trachea being secured by a couple of silk sutures passed through each side of the severed end and brought through the skin at a

higher level, a small pad of iodoform gauze was interposed between the inner surface of the trachea and the silk sutures on both sides. The lateral incisions were closed with silkworm gut and the cavity was well packed with Seabury's iodoform gauze, especially round the top of the tampon; the wound was then expeditiously dressed and the patient was put to bed again, the operation having lasted only one hour and 10 minutes. The condition of the patient being one of extreme collapse, 12 minims of solution of strychnia were injected subcutaneously, hot-water bottles were liberally applied, and an enema of two ounces of brandy and four ounces of strong black coffee was thrown up the rectum and was repeated in half an hour, and in an hour's time the great collapse symptoms had somewhat responded to the stimulation. I might state that in cleaning the front of the œsophagus I inserted a bougie almost to the cardiac orifice of the stomach in order to avoid button-holing.

After-treatment and progress.—A bronchitis kettle the steam of which was impregnated with oil of eucalyptus was kept boiling by the bedside and the tube was covered with hot flat sponges for a fortnight. Six hours after the operation the patient swallowed iced water without any inconvenience and there was a remarkable freedom from pain. Nutrient and stimulative enemata were given every four hours until the gut became intolerant. On Nov. 18th the sputum was quite normal and the cough was by no means troublesome. The patient swallowed semi-solid food without any inconvenience. The temperature was 98·4° F. His condition was well maintained on the 19th, when the sputum was somewhat blood-stained and purulent but not copious. There was some slight pain in the wound. The superficial dressings were changed and a bougie was passed from the wound into the mouth. On the 20th there was no change. All the dressings were renewed and the cavity was repacked. The cough was not very troublesome. On the 21st the sputum was somewhat offensive, purulent, and copious, and the cough was rather troublesome, but there was no pain. The wound was redressed and the tracheotomy tube was moved from the tracheal incision to the severed end of that organ. On the 22nd the sputum was less offensive and less purulent but it was still copious. The general condition of the patient was good. This condition was well maintained on the 23rd, when the sputum was much improved. Nearly all the sloughs had now separated from the walls of the cavity. This improvement continued on the 24th, 25th, and 26th. On the 27th the condition was excellent. All sloughs had separated and the patient sat up in bed for an hour and this improved condition was well maintained on the 28th. On the 29th the cough, possibly owing to saliva and food passing through the pharyngeal fistula, was very troublesome. The dressings had to be frequently changed on this account, as they quickly became soaked. The patient's condition, however, was excellent, and he got up and had exercise in his room. On the 30th he partook of mutton cutlets, swallowing solids with more comfort than liquids. On Dec. 1st there was continued improvement. The wound was perfectly healthy, and the patient was put on ordinary diet, and this improved condition was well maintained on the 2nd and 3rd. On the 4th the patient himself changed his tube and packed the cavity. He also passed the œsophageal bougie from the wound to the mouth without discomfort or inconvenience. On the 5th the patient went downstairs. He could now dress the wound and change the tube with perfect ease, and this improvement was maintained on the 6th. On the 7th he took walking exercise in the open air for about an hour and he swallowed solids and liquids without any portion passing through the pharyngeal fistula. The patient returned to Leeds alone on the 10th with an ordinary tracheotomy tube *in situ*, and taking with him a bougie which he was instructed to pass four times a day from the pharyngeal fistula to his mouth. An attempt at fitting Stewart's artificial larynx proved unsatisfactory owing to the unsuitable nature of the instrument for this case. On the 17th the patient found that the rapid contraction of the pharyngeal orifice entirely interfered with the passage of the bougie and he therefore returned to Newcastle. When I saw him the pharyngeal fistula would barely admit of the passage of a knitting needle. Dilatation was gradually produced by passing fine urethral bougies until the orifice permitted of the insertion of a small-sized sponge tent which was left in for three hours and replaced by larger ones, after which further contraction was kept in check by the passage of full-sized urethral bougies four times a day, and on the 26th I fitted in a Guessenbauer's artificial larynx, made by Hawksley of London, in which the curves of both tubes were somewhat more pronounced than in Gnessenbauer's diagram, and although it was the same length as the original an extra vertebration was added to the pharyngeal tube. The patient naturally suffered from considerable pain and inconvenience at first, but in the course of an hour the organs became more tolerant. With the reed inserted he could speak remarkably well in a loud, clear, well-voiced monotone distinctly audible at 20 yards, and when the cap was in his loud whisper could be heard 15 yards away. The irritation brought about by the apparatus caused much coughing and the reed soon became blocked. He was, however, sent to his abode in the town with the apparatus, minus the reed, in the wound. On the following day he pronounced the instrument unbearable and complained of difficulty in swallowing which he attributed to the pharyngeal tube being too long. On laryngoscopical examination the upper end of the pharyngeal tube could not be seen but the epiglottis was visible and apparently functionless. Another cause of complaint was that saliva, &c., were continually passing through the fistula, due perhaps to his not getting the obturator pushed well home. On removing the obturator and replacing it by either the reed or the cap violent coughing was very frequently induced by saliva passing into the trachea and the reed would thus speedily become blocked. The instrument was removed and was sent to a local silversmith to have certain alterations made. The artificial larynx was re-inserted after having undergone the following alterations: (1) the pharyngeal tube and the stem of the obturator were shortened for three-eighths of an inch; (2) the free end of the tracheal tube was somewhat bevelled; (3) the front plate was altered so as to present a convex instead of a plane surface to the wound (in fact, it was made identically like the front plate in Sankey's dilating tracheotomy tube); (4) the key which locked the obturator was so altered that on making half a turn more it also locked the cap and the obturator, the failure to do which indicated to the patient that he had not got them properly inserted; (5) the cap, on account of its small size, its greater frequency in use than the reed or obturator, and its liability to get lost, was secured to the front plate by a very fine silver chain; and (6) the sides of the front plate where the strings were attached were turned well forward—in fact, almost to a right angle with the plate. The object of the last-mentioned alteration was to enable the patient to fix the tracheal tube more firmly during the insertion of either the pharyngeal tube or any of the constituent parts of the instrument and consequently to lessen the irritation of the trachea by backward pressure which had been previously the cause of much distressing coughing. The pain and inconvenience were still present, but in a less degree, and swallowing was not nearly so difficult as before. After leaving the instrument in for a little time the patient became remarkably tolerant of its presence although the frequency with which the reed became blocked at first was a source of some annoyance; but this occurred less with the improvement in the coughing as soon as tolerance became established. The patient although somewhat shy of his new monotonous voice gave a recitation lasting 10 minutes just before his return home. He returned to Leeds that evening with the instrument in, having previously introduced and withdrawn it several times unaided to my complete satisfaction. Up to the time of writing the patient still complained of some discomfort and also of apparent inefficiency of the obturator in preventing saliva, &c., occasionally trickling down into the trachea. This, I consider, will eventually be overcome by the epiglottis adapting itself to the new condition.

The course of the temperature was as follows. The highest level reached was on the second day after the tracheotomy, when it was 101° F. On the day of extirpation the morning and evening temperatures were respectively 97·8° and 98·2°. On the fourth day after the extirpation (Nov. 21st) the temperature rose to 100·2°. On the evening of the 23rd it was 99·8°, but after that date it varied from 97·6° to 98·6°.

As to the microscopical appearances, on cutting and mounting sections which had been stained in bulk by the picro-carmine method the growth was seen to present the following conditions. A dense layer of squamous epithelial cells bounded the tracheal surface of the

growth, the most superficial of which having taken the stain very indifferently were rather indistinct. From the deep surface of this prolongations were to be seen here and there dipping into the subjacent tissues. In a dense stroma of new connective tissue in which there were marked cellular infiltration and nuclear proliferation numerous squamous nests of various sizes were seen. These were most abundant towards the free surface of the growth, diminishing markedly in number when followed outwards.

If I may be pardoned for presuming to offer suggestions founded on the experience of one case only I would like to make the following observations. 1. The advantage of an interval of time between the tracheotomy and the more serious operation which in this case at least was most marked, cannot be over-estimated. Not only by affording almost complete relief to the dyspnœa and to a less degree to the cough did it effect a profound improvement in the patient's general condition, but also by dividing the shock, as it were, it gave the patient time to rally under immensely improved conditions. The breathing, too, under the anæstbetic on the second occasion when tolerance to the tube had been established was much more satisfactory. 2. Seeing that this is an operation *par excellence* where time is of the utmost importance it is difficult to understand why in most of the recorded cases the operator has usually selected a Hahn's sponge tampon which necessitates a delay of 15 minutes for its dilatation. On this account and because Trendelenburg's tube which can be immediately dilated lends itself far more readily to asepsis than does Hahn's I very much prefer the dilating tampon-tube. 3. The extensive nature of the growth in this case with the entire absence of glandular involvement would seem to support Semon's view of the isolation of the laryngeal lymphatics, but unfortunately Sappey's anatomical investigations, which have entirely disproved that eminent laryngoscopist's contention, compel one to admit that the question yet awaits a satisfactory solution. 4. The ease with which deglutition was performed almost immediately after consciousness had been regained, the non-necessity for Symond's tubes, and the entire absence of anything like the alarming hæmorrhage which is often encountered in these cases and which in this case might have been excessive, as the patient had a short, stout, muscular neck, I attribute entirely to the adoption of the method suggested by Mr. Henry Morris of freeing the perichondrium and its attachments with a raspatory and avoiding the severance of any muscular structure other than the platysma. 5. The very low tracheotomy which was done in spite of Guessenbauer's contention to the contrary with a view to secure more ample working space was afterwards justified by the extensive nature of the growth. 6. Seeing that in cases of malignant disease of the larynx attempts at sampling the growth by intra-laryngeal snaring frequently prove abortive and moreover often stimulate growth, I consider thyrotomy to be infinitely preferable and that it ought to be performed in doubtful cases, as by this means the extent and nature of the disease are accurately determined and treatment can, if consent be previously obtained, be carried into effect immediately.

In conclusion, I beg to acknowledge the kind services of Mr. T. P. Parkinson who examined the growth microscopically and to thank Mr. N. C. Bailes for the preparation of the notes on this case. To nurses Duckett and Ranson I am also much indebted for their kind and skilful attention to the patient which contributed in no small degree to the success of the case.

Newcastle-on-Tyne.

PARTURITION FOLLOWED BY A BRAIN LESION INVOLVING THE SPEECH AND CERTAIN MOTOR CENTRES.

BY R. S. BERRY, M.R.C.S. ENG., L.R.C.P. LOND.

ON August 25th, 1898, I was called at 5 A.M. to a multipara, aged 36 years, who was stated by the messenger to have just been delivered of a child and to be in a grave condition. I arrived at the house at 5.15 A.M., where I found the following state of affairs. The patient, a stout, big-built woman, was lying on her left side "huddled up" and obviously in a state of collapse. The extremities were cold, the face and lips were blanched, the pulse was imperceptible at the wrist, and on being spoken to the patient responded only by an inarticulate mutter, but she knew that she had someone demanding an answer from her. I immediately examined the uterus and the bed in spite of the midwife's assertion (a perfectly correct one) that there had been no post-partum hæmorrhage. The uterus was firmly contracted, giving the usual cricket-ball sensation upon palpation per abdomen, and there was no such amount of blood upon the bed as would indicate a profuse hæmorrhage. The midwife (the patient's own sister) then gave the following account of what had happened before my arrival. The child, a healthy male, had been born without trouble two hours previously, the placenta following shortly in a natural manner, and the patient herself had been in a condition to call for no alarm until half an hour previously to my arrival. She had then suddenly become restless for a few moments, throwing her limbs about, and she was blanched and unable to be roused and could not be got to speak rationally. The possibility of a pulmonary embolism was the first thing that suggested itself to my mind, the notion of post-partum hæmorrhage being now excluded. The collapse was extreme and I set about trying to rally the patient before attempting any further diagnosis at all. She was lifted in the bed and the whole of the wet and blood-stained bed-clothing was removed, and then she was wrapped in warm blankets and packed all round with hot bottles. I gave her a stiff tumblerful of hot brandy-and-water by the mouth, the swallowing movements being perfectly coördinated although she remained quite apathetic to anything that was being done for her and made no attempt to help herself in any way. I now made some friction over the heart and in a short time had the satisfaction of perceiving that the beats were improving in force and lessening in frequency. The breathing also, which had been rapid and shallow in character, slowed down a little and became deeper *pari passu*. Some improvement being maintained by the continued application of warmth and friction I examined the chest and discovered nothing abnormal with the breath sounds. The apex beat was not to be felt upon the chest wall. On auscultation of the heart sounds a distinct systolic murmur was plainly audible over the second right intercostal cartilage, diminishing rapidly in audibility when traced downwards and outwards towards the ordinary site of the apical beat. No murmur was apparent in the pulmonary area, but the second sound in both aortic and pulmonary areæ appeared to me to be blurred in distinctness, but in neither position could I discover any reduplication of that sound. On careful continuance of auscultation over the aortic area I found that I could certainly separate the murmur from the true bruit of the systole—that the two sounds (the systole and the murmur) were distinct from one another although occurring simultaneously. And this view was borne out by the general state of the patient who although the murmur was constant presented no signs of any incompetence in the performance of the valvular office at the aortic orifice. I diagnosed a chronic endocarditis of the surface of the valves, one affecting the surface and interfering in no way with the apposition of the edges of the lunulæ, and concluded that as the result of the exertion of parturition a vegetation mass had become detached and was impacted as an embolus in the brain. The further progress of the case strengthened this view, for it soon became apparent that there was loss of power down the whole of the right side of the body. There was no facial paralysis, the most noticeable thing about the face being the totally vacuous expression, especially in the eyes, which rolled aimlessly about at intervals and when at rest gave the impression of entire apathy to surrounding objects. The patient made no voluntary effort to speak nor could any answer in speech be obtained from her until between 9 A.M. and 10 A.M. (four or five hours after the seizure), when she commenced to mutter to herself one particular sound. The first answer obtained from her at all was in response to the question, asked somewhat loudly and sharply after repeated failures to elicit reply, "Do you feel better?" She said shortly and distinctly, "Better," and then she began to mutter at intervals the same sound or word (it was not distinguishable as any ordinary word) as she had first been doing. I remained with her, and as the day wore on it became apparent that she was wishing now and then to speak but was unable to get beyond the inarticulate mutter, until in the afternoon, when asked by myself, "Who am I?" [no answer] "Am I the doctor?" she gave an affirmative

gesture and said "Doctor" perfectly distinctly. I imagine, from the completeness of articulation of these two words and also from the distinctness of the muttered sound, that the lesion in no way interfered with out-going expression of thought when once that impression had framed itself into a concrete idea in the higher centres. Co-ordination of the speech muscles, in fact, was not interfered with, but at the same time the paralytic condition of the right side was both of a sensory and motor nature, and I could not account for the fact that motor speech coördination was perfect, that there was no facial palsy, and that the tongue was protruded (now) in the middle line on request, while the condition of the limbs was so profoundly modified from their normal state. The paralytic condition of the right side deepened and by the next morning the right-hand grasp was almost gone and there was impaired cutaneous sensation over the whole of the right limbs. The speech, however, was improving; the patient now answered questions requiring a simple negative or affirmative always correctly but after a certain amount of hesitation, as though some obstacle lay in the outward passage of her idea. Whenever she spoke voluntarily at this time she strung her sentences together coherently and with purpose, but here and there she made use of a totally outside word (always single) or for a word, no matter whether noun, adjective, verb, or what not, she occasionally substituted the original short sound which had been her first voluntary effort at speech since the commencement of the attack. Throughout this day (the second) her most marked mental phase was the evident irritability, almost amounting to anger, with which she answered after being questioned or spoken to for any length of time. And I noticed on this day that her hair which under ordinary circumstances was straight, black, and smooth, was in the erectile condition which obtains sometimes among maniacal patients. The surrounding conditions of the patient prevented, somewhat to my chagrin, my making any attempt to test her capabilities as to reading and writing, although it is certain that not much could have been elicited as to the existence of agraphia or otherwise owing to the paralytic state of the right hand and arm. The speech volition improved quickly and on the third day, although she rambled now and then, she spoke with distinctness and in spite of a little initial hesitation (this was diminishing) communicated anything which she wished to do in a comprehensible manner. By the end of a week from the onset of the attack I could discover no verbal amnesia at all and the power of the right limbs began to return. Skin sensation improved more quickly than muscular movement and she located pin-points and pain sensations accurately while the motor activity of both arm and leg was still much modified. From this time up to December she improved rapidly in every way, the mental condition being then normal and the physical weakness having cleared up to a great extent, a fair amount of difference between the right- and left-hand grasp still remaining.

I submit that the apparent discrepancy between the recoveries (in point of time) of the mental and motor states admits of a physical explanation. I believe that the impaction of the embolus was never a complete one with regard to the lumen of a vessel; that the speech centre, although for a time partly cut off from its nutrition, was never wholly so; and that the centres of movement for the limbs were the more deeply affected owing to an increased want of blood-supply. To bring this about there must either have been two emboli or one embolus impacted at a branching point of some vessel common in its origin as the feed-pipe of the speech and motor centres. I think that the latter was the more probable state and that the speech centre received throughout a supply of blood just sufficient to maintain it at a low ebb of vitality, while the motor centres from the unequal lapping of the embolus into the lumen of their feed-pipe were for a time wholly cut off from nutrition.

It seems to me that a case of this sort may afford a wide field for the consideration of the origin of idea, as to the retentive brain power for idea once originated, and as to the methods by which the doors which guard the portals of thought must be swayed before idea can become translated into action. The brain injury in this case, though an organic one in itself, was set forth and became capable of diagnosis by the functional derangements which it caused. The nutrition of the centres being interfered with the psychic functions are for the time suspended but never destroyed, for their restoration is complete when the obstacle having been removed the supply through the feed-pipe returns to its normal quantity. But though utterly dormant for a time there is no destruction of those successive psychic phases whose sequence makes up the sum of thought. Their vitality, their entity, is not destroyed, for with renewed nutrition they emerge from sleep again for all the practical purposes of life as sound as though they had passed through no ordeal at all. And, by the way, it is interesting to note how those commonest everyday notions, the efferent path of which is, so to speak, beaten broad and smooth by long use and wont, are the first to return. Initially a confused interweaving of all idea, a chaotic jumbling which gives clue to its existence only by the outward sign of a meaningless sound, but that sound a constant one, the product, say, of a telegraphic cable the operators at the central station of which are for the time being demented, the insulation between the wires of which is for the time being gone, the myriad messages of which are blurred at the outset into nothingness of meaning and emerge only as an aggregate of confusion—the powerful, case-hardened ideas whose work has forged them into irresistible forces, from babyhood onwards, cleaving their way through the chaos, thrusting aside their newer, weaker brethren and becoming cosmic as the simple negative and affirmative. Close behind these foremost leaders of idea comes the recovery of recognition of objects and persons that have through long use become part and parcel of everyday life and, lastly, the return of those infinitely numberless variations and combinations of idea which in their sum constitute what we call volition.

Are there brain cells the life-history and conditions of which differ from all others in the cell massing which constitutes our bodies, which are each separately and indelibly stamped with a concrete mould which is a thought, indestructible as the ultimate physical atom for all eternity? Once let such a theory be worked upon until it may be raised to the dignity of a scientific truth and it seems to me that a clear light may at last be thrown upon the processes of which intellect as we know it is the outcome. Injury, however trivial, to all other body cells means speedy replacement, but should such replacement be required among the brain cells after such a case as that which I have described and the mind must return to babyhood and the whole erection of the adult intellect be rebuilt from its foundations. Years upon years must elapse before complete restoration could occur and I submit that in this case the rapid return to intellectual soundness goes far to prove that idea once conceived and translatable to the world as thought is a thing which is almost incomprehensible to us by reason of its immortality.

P.S.—I imagine that the patient's early capability of replying with the words "doctor" and "better" to questions asked was merely a parrot-like imitation of the questioner, the power to frame such replies arising from the external stimulus the leading notions of which were sufficient to afford a new impress to some empty, waiting brain cell, possibly one of the right hemisphere and hence untouched by the lesion.

Southport, South Queensland.

NOTE ON A FATAL CASE OF LITHÆMIC POISONING.

BY CHARLES R. ELGOOD, M.D. LOND.

AN elderly man, aged 69 years, of thin, spare frame and of abstemious habits, suffered from five definite attacks of disease presenting the symptoms described below. The patient had passed a good deal of his life abroad; he had suffered in the "fifties" from some malarial fever which he had contracted in the East, and had had influenza five years previous to the commencement of this illness. In all other respects he had enjoyed good health. There was a strong family history of gout, though he himself had never suffered from the disease.

The dates and the duration of the attacks were as follows. The first began on June 20th, 1896, and lasted for 14 days, and the second began on Oct. 13th, 1896, and lasted for about three weeks. Recovery was not so complete after this attack as it was in the case of the others. The third attack

commenced on Dec. 19th, 1896, and ended on Jan. 20th, 1897. The fourth began on March 3rd, 1897, and lasted to the end of the same month. The fifth, and last, began on June 18th, 1897, and terminated fatally on July 3rd. Each attack was foreshadowed by irritability, great restlessness, intense itching of the skin, and dyspnœa of an asthmatic type. Symptoms of violent gastric disturbance followed, there being absolute nausea. The tongue was covered with a thick white fur and epigastric pain was frequent. Anorexia was extreme. These latter symptoms were throughout so prominent and irremediable that the gastric crises of tabes dorsalis were constantly recalled to mind. The radial pulse was now observed to become exceedingly tense and cord-like, though the condition was never more than one of virtual tension, the heart force being always weak. The skin was harsh and dry. Coincident with this condition of the tongue and pulse the urine was observed to contain a large amount of uratic sediment and the quantity of this deposit appeared to vary with the severity of the symptoms, for as the urates ceased to be excreted the pulse relaxed to such a degree that it could with difficulty be felt, the tongue became clean, the appetite returned, the dyspnœa and itching ceased, and convalescence began. Recovery, however, was invariably slow, and was delayed by the prostration, the anæmia, and the enfeeblement of the heart with consequent œdema which the attacks appeared to cause.

On several occasions epistaxis was a prominent symptom of the attacks. Thrombosis of the right external jugular vein was present in the second attack, and thrombosis of the external saphenous vein in the third. Twice between the second and third attacks there was pain in the great toe which was thought to be due to gout. The proportion of white cells in the blood was found to be somewhat increased, and was 11 to the field. No deformed red cells were noted and the rouleaux were well formed. The spleen was not enlarged. The heart showed a certain amount of dilatation. The valves appeared healthy. There was evidence of some atheromatous degeneration of the great vessels, but on the whole the heart was not considered seriously or primarily affected. The liver was large, extending three fingers' breadth below the costal margin. It was smooth and not tender. Cough, although always a marked symptom in these attacks, was never proportionate to the physical signs, which comprised some dulness at the right apex and down the left back. There was moist crackling in the latter situation but no tubular breathing.

No treatment seemed to have the slightest effect on the attacks either in shortening their duration or in mitigating their severity. The patient on these occasions would subsist for days on a few ounces of milk and a little brandy-and-water. Nothing would induce him to take more. In the fifth attack the symptoms did not abate, the urates continued to be excreted, the pulse failed to relax, and then the higher nervous centres became affected as was evidenced by Cheyne-Stokes breathing, groaning, lethargy, and a gradual loss of consciousness. The patient died in a comatose condition on July 3rd, 1897.

During the attacks the quantity of the urine was decreased. It varied from a few ounces below 20 ounces to a few above that number. The specific gravity was 1030. It was acid and it contained no albumin and no sugar. It was highly coloured and was passed thick and turbid from a most copious deposit of pink amorphous urates. Crystals of nitrate of urea formed immediately on the addition of nitric acid. Microscopical examination showed that the deposit consisted entirely of amorphous quadriurates, crystals of uric acid forming in abundance when distilled water was added to the specimen. No other crystals were seen. The total output of urea, which when estimated by the ureometer gave a rather higher result than when it was calculated from the specific gravity, varied from 320 to 350 grains in the 24 hours. Considering that the patient was an emaciated, elderly man, who kept his bed and took scarcely any food, this amount appeared to be greater than would have been expected. During the intervals when he was in fairly good health there was some return of diuresis. After the fourth attack when he was out of his bed but was still confined to his room he was passing 28 ounces of urine, the specific gravity of which was 1025. The urea was estimated at 350 grains. A fortnight later, and a week after all trace of urates had disappeared, he was passing 36 ounces of urine, the specific gravity of which was 1012. The urea was estimated at 250 grains. Thus the urea, apart from the question of absolute increase, was certainly not stationary and more than this, in spite of the fact that he was on an absolutely starvation diet more of this substance was excreted during the attacks than was the case during the intervals when he took a reasonable amount of food. Numerous observations showed that the quantity of urine passed never seemed to vary so much as did the degree of its concentration. The uric acid was never estimated, but, if it be correct that in health only seven grains of this substance are excreted in the 24 hours, it must have been enormously increased, for the amorphous quadriurates could be ladled out by teaspoonfuls from every sample of urine which was passed during the attacks. Towards the end of the illness, when coma was threatening, the urine, which still preserved the above features, became sensibly diminished in quantity. It could not, however, be measured.

Such a condition of urine, if persistent, denotes, according to the late Dr. Ralfe,[1] a general increase of tissue metabolism throughout the body, usually accompanying or preceding some grave constitutional disturbance, and certainly in the case before us the prostration and anæmia which followed each uratic output suggested that during the attacks some increase in the molecular activity of the cells of the body was going on and so affecting the metabolism. That the excess of uric acid during the attacks was not due to disturbance of the nitrogenous equilibrium owing to the food taken is certain, for the patient took practically no food. It is also improbable that it was drawn from accumulations stored up in the system as the result of previous excesses, for he was a most abstemious man. The futility of treatment, too, recalls the cases recorded by Dr. Ralfe[2] of patients who persistently passed urine of high specific gravity containing abundance of urates and who continued to do so in spite of all treatment until some unknown cause effected an improvement in the general health. Further, the rhythmical nature of the attacks, the regular march of events in each, and their uniform duration uninfluenced by treatment, all suggest that some part in the rôle of their causation was played by the central nervous system. Dr. Latham[3] who believes that excess of uric acid is mainly due to imperfect metabolic activity of the liver-cells whereby the glycocine fails to undergo transformation, assumes that independently of the vaso-motor fibres there are various nerve-fibres distributed to the cells of that organ, one set regulating the transformation of saccharine and the other that of the nitrogenous elements brought to them by the portal blood. Thus, if I understand him rightly, one might reasonably infer from the analogy of what occurs in the case of the "diabetic puncture" that it might be possible to produce an excess of uric acid by a somewhat similar lesion. We should thus have a centre presiding over the metabolic activity of the hepatic cells, and if this be so may not the activity of the cells of other organs and tissues be under a like control? Whether excess of uric acid arises from an increase or decrease of metabolism is still an open question, but given the existence of such a centre as is postulated above it appears to me to be possible that a poison such as that of malaria or influenza circulating in the blood might either stimulate it to rhythmical activity or inhibit its normal function in such a way as to produce the phenomena that are usually believed to accompany an alteration in the rate of metabolism.

That the dyspnœa, the itching, the tense pulse, and the subsequent nervous phenomena were caused by an undue proportion of urates in solution circulating in the blood is, of course, not proved and the suggestion would be made with the more diffidence when it is remembered that so high an authority as Sir William Roberts[4] has stated that the gouty may enjoy complete immunity from symptoms of any kind, though their fluids are impregnated with biurates to the point of saturation; and, moreover, we all know that patients with leucocythæmia pass enormous quantities of urates and never present symptoms comparable to the above. It is, however, I submit, quite conceivable in the present state of our knowledge that inappreciable changes in the condition of the blood may at one time render a poison active and at another inert. In

[1] Ralfe: Morbid Urines, 1882, p. 76.
[2] Ibid., p. 89.
[3] Croonian Lectures, THE LANCET, vol. i. 1886, p. 726.
[4] Croonian Lectures, 1892

this connexion Dr. Owen Rees[5] says: "It is, of course, impossible to say how or why it is that the same urinary matters should become converted into different poisons in the blood in different diatheses; but if we turn to non-vital chemistry we find analogical results. The ferment present may differ, the fluids may vary in density or in temperature, and in the one case a poison may be produced capable of causing a violent convulsion and in the other a milder toxic agent may appear as a result causing inflammation of venous capillaries and all the phenomena of acute gout."

Lastly, the diminution of urine observed towards the close suggests that during the earlier attacks the kidneys remained sound and were enabled to excrete a sufficient amount of the urates to avert any very serious result; but later, when they were no longer able to withstand the strain, they failed to do so and a fatal dose of the poisonous material was allowed to accumulate.

Windsor.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF SEPARATION OF THE LOWER EPIPHYSIS OF THE HUMERUS WITH INJURY TO THE BRACHIAL ARTERY.

By E. WHARMBY BATTLE, M.R.C.S. ENG., L.R.C.P. LOND.,
JUNIOR HOUSE SURGEON, WARRINGTON INFIRMARY; LATE HOUSE SURGEON, MANCHESTER ROYAL INFIRMARY.

ON Nov. 7th, 1898, a boy, aged eight years, fell on his right elbow and came to the Warrington Infirmary within half an hour after the accident. The elbow was but slightly swollen and there was separation of the lower epiphysis of the humerus with backward displacement. Reduction was easy and without tendency to recurrence of the displacement. Before and after reduction no pulsation could be felt in either radial or ulnar artery at the wrist. The hand was cold and blue and there was superficial and deep anæsthesia of the hand and of the forearm up to its middle. Pressure on the fingers left a white imprint lasting for nearly half a minute. There was no pain. The limb was swathed in wool and bandaged to an internal angular splint. Three days later circulation, as judged from finger-pressure, was freer, though pulsation at the wrist was still absent. The hand was swollen and less blue than formerly. It was colder than the uninjured hand, especially after a short exposure. The anæsthesia was as before. On the 14th faint radial pulsation could be felt. The hand was less swollen, it was warmer and of better colour than before, and sensation was returning. The improvement continued and at the end of the second month there was good elbow movement.

Occlusion of the brachial artery from injury is a rare complication in fracture of the lower end of the humerus. Cases where radial pulsation is less in volume on the injured side and remains so for a short time when all displacement is rectified are sometimes seen, but even complete temporary occlusion resulting from displacement is not often met with. In the above case the facts that there was very little swelling about the joint and that after replacement of the fragments pulsation was still absent and remained so for several days point to there being a direct injury of the artery itself.

Warrington.

DAILY HÆMATEMESIS FOR OVER A YEAR.

By MONTAGUE D. EDER, M.R.C.S. ENG., L.R.C.P. LOND.

THE patient was a coloured woman, aged 20 years, and she was brought to me by her mistress on Oct. 7th, 1898, as she was stated to be suffering from phthisis. The history was briefly to the effect that for over a year she had been vomiting blood, occasionally twice a day but always once, and that in the morning, and the statement was confirmed by her mistress who had frequently been present on those occasions. The quantity varied from half a wineglassful to a tumblerful. Black motions had never been passed to the knowledge of the patient and she had never suffered from indigestion, which is a very rare complaint in this country, but she had had fever several years before. Her menstruation was regular. Her feet and hands were invariably cold. She had had much pain just below the right clavicle. She was not so anæmic-looking as most of the people in this district. Her lungs and heart were normal and her pulse was of good volume, with a pause at every eleventh beat (the significance of which I do not know), but the beats were otherwise quite regular. Her temperature was 99° F. at midday. There was no tenderness in the epigastrium. The spleen was palpable; there was no goitre. Laryngeal and ophthalmoscopic examinations showed nothing abnormal. In her right nostril or on the septum near the pharynx there was a ragged ulcer which tinged a cotton-wool mop with blood. I asked the patient and her mistress to return after breakfast and to bring with them any blood vomited in the interval. The women had ridden a four hours' journey for a consultation and were anxious to return home before dark. Two hours later they returned, bringing with them 34 fluid drachms of blood which the mistress and others had seen vomited and which was stated to be an average quantity. It had been vomited soon after a meal and was therefore very acid; it was of mammalian origin. After cauterisation of the septal ulcer with chromic acid the patient returned home. To make a second journey to this place for further treatment would have necessitated eight hours' riding on a banca road, and although I begged them to return in a few days I heard nothing more about the case till I accidentally met the mistress some time afterwards when I was told that there had been no further hæmorrhage. When I made the examination I did not consider that the hæmorrhage was entirely due to the ulcer. I purposely avoided quinine and other drugs. The whole population suffers from malaria and more than half from goitre or its allies. I endeavoured to exclude malingering to which the degenerate black races are so prone.

Palmira, Republic of Columbia, South America.

A CASE FOR DIAGNOSIS: ERYTHEMA?

By EDGAR F. CYRIAX, M.B., CH.B. EDIN.

THE condition now described has been observed by me four times in the same patient—namely, in the years 1889, 1893, 1895, and 1899. On every one of these occasions the symptoms were the same and they followed one another in the same order, and the patient felt much better after the attack. There never were any relapses. I have searched unsuccessfully in medical literature for a description of the ailment and should be glad to hear if any of the readers of THE LANCET have met with a similar case. It was certainly not specific in origin. During the last attack my patient was also under the observation of Dr. Axel Möller, M.D. Berl., who entirely concurs in and confirms my description of the case.

The patient was a man, 20 years of age. For a few days past (i.e., since Jan. 23rd, 1899), he felt weak and disinclined to work and had considerable headache with pain on moving the eyes. He felt better on the 26th and on the 27th he declared himself to be perfectly well. On the evening of the 27th, however, he began to have a boring pain in his legs and thighs and after a very restless night he found on the morning of the 28th that locomotion was very difficult owing to pain and swelling in the left thigh posteriorly, the left calf, and to a less extent in the right calf, left forearm, and some parts of the anterior abdominal muscles. Crimson patches had appeared over the inflamed areas which stood out from the surrounding tissue and had a hard margin and consistence. Some of these patches were as large as a two-shilling piece and varied in size down to about a pin's head. These patches were sore to the touch. At about 12 noon he noticed that there was slight inflammation in the prepuce which began rapidly to swell, and by 7 P.M. the whole skin covering the penis was of a deep purple colour, the penis being now about twice its normal thickness. The swelling and discolouration had spread right up to the symphysis.

[5] Braithwaite's Retrospect of Medicine, vol. i., 1877, p. 41.

There was no pain in the penis. On palpation it could be made out that the skin over the penis was distended with semi-liquid blood. There were no signs of any synovitis. By 11 P.M. the extravasated blood in the skin of the penis had spread down on both sides and had filled up the scrotum so as partially to obscure the testicles. On the 29th the inflammation in the arms, legs, and thighs had given way to œdema, the penis began to shrink in size, and several bullæ filled with slightly bloody serum appeared on its surface. The patient felt much better. On Feb. 1st the penis was almost normal in size and the scrotum was smaller, but both the penis and the scrotum were considerably discoloured. New blisters here appeared in the place of the former ones which were opened. On the 2nd there was hardly any inflammation or œdema left in the arms, legs, or thighs and the hæmorrhagic patches over the inflamed areas were almost gone. On the 5th the patient was normal in every respect excepting that the skin was being renovated over the areas where the blisters had been. On the 7th new skin was completely formed over the parts where the blisters had been. The man was otherwise quite well and said that he felt "splendid."

Stockholm.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

A CASE OF REMOVAL OF THE INTERNAL SEMILUNAR CARTILAGE OF THE KNEE.

(Under the care of Mr. BOYCE BARROW.)

OF all the articular lesions which were formerly grouped together under the title of "internal derangement of the knee-joint" probably the most important is a detachment of one of the semilunar fibro-cartilages. The immediate results of operation are probably in most cases favourable but doubts have been expressed as to the ultimate value of the joint from which the whole or a part of one semilunar fibro-cartilage has been removed. In Mr. Barrow's case recorded below five months after the operation the movements of the knee were perfect and this fact affords a complete vindication of the operation. Mr. H. Allingham has published a similar case[1] in which the patient remained quite well two years after the operation; and in a case brought before the Clinical Society of London in 1894 by Mr. C. B. Lockwood the patient could cycle freely 21 months after a partial removal of the internal semilunar cartilage, though he was afraid to play tennis. So we may conclude that, provided asepsis prevails during the operation and afterwards, there is every reason to anticipate a very favourable result from excision of a displaced fibro-cartilage of the knee. For the notes of the case we are indebted to Mr. J. R. Benson, surgical registrar to the hospital.

A youth, 19 years of age, on admission to King's College Hospital, was well-built, healthy, and much addicted to outdoor games. He complained of weakness of his left leg and said that he had had attacks of severe pain which laid him up for days together. These attacks had become frequent and troublesome of late. The history he gave was as follows. About two years ago whilst playing football he twisted his left leg and fell. It was not easy to make out the exact position of the bones at the time of the fall, but it seems that he turned sharply and rotated the leg and foot outwards as he fell. He felt at the time a severe sharp pain in the left knee and was unable to straighten his leg. After a little time this difficulty was overcome and he could extend the limb, although it was still painful. A sharp attack of synovitis seems to have followed, for the knee became swollen and tender and he was laid up for some days. Then he got about again and did not suffer any inconvenience beyond a sense of weakness in the joint. A few months later he was playing football and kicking the ground instead of the ball he again "put his knee out." This time he was not so severely injured and quickly recovered. From time to time, however, although he had no bad attacks he suffered from pain and fixation of the joint. Four months previously to admission he was jumping a ditch and twisted his leg again. It was very painful and bent up under him so that he could not extend the knee. He could flex it further but he could not get it straight. He noticed, too, that there was a small, hard lump projecting from the joint under the skin on the inner side of the knee and this seemed to him to prevent the knee going back into its place. He was carried to a medical man who reduced the deformity and then the patient was taken home to bed. The knee became very painful and swollen and ever since it had been useless to him on account of the pain and weakness. He could not walk without pain, but frequently the joint gave way and remained fixed in the flexed position and on these occasions he generally could feel the hard lump described above.

On inspection the left leg was seen to be a good deal wasted above and below the joint and consequently the joint looked more enlarged than it really was—in fact, the measurements of both knees were nearly equal. Some fluid could be detected on palpation. Flexion and extension of the joint were free. There was also distinct lateral movement in the joint. Over the inner side of the head of the tibia was a painful spot and here a distinct depression could be felt.

The patient having been prepared and anæsthetised Mr. Barrow made a semicircular incision across the front of the left knee from condyle to condyle, extending as low in front as the tubercle of the tibia. The ligamentum patellæ was divided and the bone was turned up. When the joint was thus opened the internal semilunar fibro-cartilage was found to be detached from the tibia throughout most of its extent (especially in the front and at the sides) and folded upon itself. The lesion was so severe that any attempt at replacement was impossible. Both the cartilage and the bone had altered from the normal condition and the cartilage looked like a twisted mass of fibrous tissue. Mr. Barrow therefore dissected out the greater part of the cartilage and then he stitched up the incisions of ligamentum patellæ and capsular ligaments and the joint was closed. The superficial wound was sutured and dressed in the usual way. No drainage-tube was used. Seven days later the skin stitches were taken out, a collodion dressing was applied, and the joint was put up in light Croft's plaster splints. With regard to the after treatment, as Mr. Barrow considered that the too frequent or violent movement of the joint in such cases which is liable to occur if massage and passive movements are ordered do not benefit the part but rather tend to do harm and prolong the trouble, the joint was left in the splints for three weeks. The patient meanwhile was allowed to go about on crutches. Then he was encouraged to walk on the leg and take off the splints once or twice a day and move his limb himself, and some days later he left off the supports altogether. He left the hospital 10 days after the operation but attended as an out-patient from time to time during the next few weeks to report progress.

Remarks by Mr. BENSON.—The above case presents more interest than is usually met with in operations upon the knee both on account of the extent of the operation and of the rapidity and completeness of recovery. Before operation the patient could not work or even get about without constant discomfort and frequent attacks of severe pain which would lay him up for days together. When I saw him five months after the operation examination of his leg proved it to be as free from pain or weakness and as moveable as the sound limb. He walked quite well and had never had pain or trouble of any sort in the knee since leaving the hospital and he is now back at work with as useful a limb as ever he had.

[1] Transactions of the Clinical Society of London, vol. xxii., p. 12

ROYAL INFIRMARY, MANCHESTER.

A CASE OF BRADYCARDIA.

(Under the care of Dr. GRAHAM STEELL.)

BRADYCARDIA may be caused, according to Dr. J. T. Whittaker,[1] by eight conditions: (1) it may occur in

[1] Twentieth Century Practice of Medicine.

certain diseases of the heart; (2) it may result from compression of the nucleus of the accelerator nerve in the spinal cord or from peripheral irritation of the vagus; (3) it may be due to organic disease of the nervous system, as in myelitis and meningitis; (4) it may occur in the course of general diseases as in convalescence after typhoid fever; (5) it may arise from various poisons, as tea or lead; (6) it may be the result of reflex irritation from the intestine; (7) it may occur in neuroses, as hysteria; and (8) it may be the result of a neuroses of the intracardiac ganglia. Perhaps the best known example of bradycardia is to be found in Napoleon the First whose pulse habitually did not exceed 40 beats per minute. Dr. Steell's interesting case is made still more interesting by the curious heart murmurs which were present. For the notes of the case we are indebted to Mr. W. J. S. Bythell, B.A., M.B., Ch.B., house physician.

A man, aged 49 years, was admitted into the Royal Infirmary, Manchester, on Oct. 4th, 1898, complaining of weakness, dyspnœa, and dizziness. He stated that he had been more or less short of breath all his life, but more markedly so during the last 11 weeks. In July last he fainted while at his work and also on two other occasions since when out for a walk. He was also very subject to attacks of dizziness which were accompanied by "shooting sensations starting in the heart and passing to the back of the head." There was no history of either rheumatism or chorea and there was nothing in the family or social history of any importance. The patient was a non-smoker and "practically a teetotaler" and attributed his illness to overwork.

On examination the patient was found to be a moderately well-nourished man with a markedly slow and deliberate temperament. There was no cyanosis or œdema, the liver was not obviously enlarged, and there was no albuminuria. On inspection and palpation the apex impulse was found to be in the left fifth intercostal space just exceeding the nipple line. The cardiac dulness extended four inches to the left and one inch to the right of the mid-sternal line and reached as high as the third left costal cartilage. The pulse-rate on admission was 40 per minute, but on no subsequent occasion was it as rapid as this, averaging from 32 to 35 beats. Neither drugs nor exertion appeared to have any effect upon the rate. The tracings showed a regular good-tension pulse On auscultation in the mitral area the first sound with an occasional systolic murmur was distinctly heard; the second sound was also audible and was followed after a distinct interval by a well-marked diastolic murmur. An occasional faint systolic murmur was also heard at the base. There was marked epigastric pulsation and also a good deal of venous pulsation in the neck which was characterised by a peculiar triple rhythm.

A few weeks later the systolic murmur became quite constant at the apex, while the second sound was obscured by a new murmur, so as to produce a double diastolic bruit. About the end of November a still more remarkable phenomenon occurred in the form of a faint and inconstant third diastolic murmur which lasted some days. During his stay in hospital the patient did not appear to gain to any very great extent in strength, and in spite of the usual cardiac tonics and stimulants his pulse-rate remained unchanged; he also continued to show a tendency to dizziness and faintness. On the other hand, his appetite and general condition remained good and at his own request he was discharged on Dec. 28th, 1898.

Remarks by Dr. BYTHELL.—The above case of bradycardia may prove interesting in relation to the case under the care of Dr. C. Dickie Murray which was published in THE LANCET of Jan. 28th. The present case has some unusual features which make the diagnosis by no means easy. The absence of any history of rheumatism or chorea was certainly against the presence of a valvular lesion, the dyspnœa from birth and the murmurs being the only evidence in favour of mitral stenosis. The systolic murmur was of course easily accounted for by mitral incompetence, functional or organic. The case also presents some points of similarity to that under the care of Dr. Murray. In neither was there any obvious cause for the bradycardia, nor was the latter condition at all influenced by exertion or treatment. As regards the murmurs in Dr. Murray's case it seems open to question whether they were not in part at least vascular, as the diastolic was inaudible over the body of the heart itself. The venous origin of this murmur is suggested by its seat over the base of the heart and by its extending along the vessels of the neck. The systolic murmur might have been produced in the arteries, while what was apparently a diastolic murmur was in reality the continuous venous bruit, obscured during the systole by the arterial sound and becoming audible during diastole. Such at least appears to be a very possible explanation of the case and is moreover in accordance with what was found at the necropsy. In Dr. Steell's case it is impossible to speak more dogmatically with regard to the diagnosis. It is difficult to account for the sounds which were heard without assuming the presence of a valvular lesion, and the possibility of congenital disease must be borne in mind owing to the duration of the symptoms.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Administration of Definite Mixtures of Nitrous Oxide and Air and of Nitrous Oxide and Oxygen.

A MEETING of this society was held on Feb. 14th, Mr. F. J. GANT, Vice-President, being in the chair.

Dr. F. W. HEWITT read a paper on the Effects produced in the Human Subject by the Administration of Definite Mixtures of Nitrous Oxide and Air and of Nitrous Oxide and Oxygen. The investigation was based upon the following carefully recorded and timed administrations:—

	Cases.
Pure nitrous oxide	22
Nitrous oxide mixed with different percentages of air ...	107
Nitrous oxide mixed with different percentages of oxygen	102
Total	231

In each administration records were made concerning anoxæmic convulsion, cyanosis, or other changes of colour, stertor, retching movements, phonation, excitement or reflex movements, after-effects, dreams, duration of inhalation, duration of anæsthesia, quantity of gas or gases inhaled, operation performed, &c. In order to compare cases and groups of cases with one another and to ascertain to what extent certain symptoms were met with under certain mixtures arbitrary numerical values were given to the phenomena of the different administrations. By this plan it was found possible to draw up charts and to make numerous interesting comparisons not only between groups of cases but between administrations of different mixtures to the same patient on different occasions. The following were the conclusions at which Dr. Hewitt arrived: 1. When pure nitrous oxide was administered to the human subject in such a manner that no free oxygen gained admission during the administration certain phenomena arose which might be regarded as being either (1) phenomena of anæsthesia or (2) phenomena of asphyxia. 2. The anæsthetic phenomena of nitrous oxide, although apparently very different from those of ether or chloroform, were in their essential features remarkably similar. 3. The most conspicuous of the asphyxial phenomena of pure nitrous oxide were (1) embarrassed and deeply stertorous breathing; (2) cyanosis; and (3) anoxæmic convulsion. All these might be eliminated without interfering with the anæsthetic effects of the gas by administering with it certain proportions of oxygen, either pure or as atmospheric air. 4. There were other less obvious asphyxial phenomena such as wide dilatation of the pupils, swelling of the tongue and adjacent structures, and rapid cardiac action which, like the more important symptoms above referred to, might be prevented or modified by similar means. 5. Under the influence of pure nitrous oxide breathing became deeper and quicker than usual. At the end of from 55 to 66 seconds its rhythm became altered either by (1) obstructive stertor; (2) anoxæmic convulsion attacking the respiratory muscles; or (3) both conditions combined. Paralytic cessation of breathing was very rare and when it occurred was dependent quite as much upon cerebral anæmia from defective circulation as upon the presence of unoxygenated blood in the vessels supplying the respiratory centres. 6. The deep and obstructive stertor of pure nitrous oxide narcosis was not met with when employing mixtures containing moderate percentages of air or oxygen. With such mixtures only softly snoring breathing was produced.

When the percentage of air or oxygen was considerable (30 per cent. of air or 13 per cent. of oxygen) respiration became noiseless and free from all obstruction. 7. The most marked cyanosis was met with when very small percentages of air (from 3 to 6 per cent.) or oxygen (under 3 per cent.) were administered with nitrous oxide. With pure nitrous oxide cyanosis might not have time, as it were, to become pronounced, for the administration might be cut short by deep stertor. As the percentage of air or oxygen increased cyanosis lessened, till with 30 per cent. of air it was very slight and with 11 per cent. of oxygen it disappeared altogether. 8. Anoxæmic convulsion, like cyanosis, was liable to be greater with small percentages of air or oxygen than with pure nitrous oxide itself and for the reason just given. But as the percentages of air or oxygen increased the convulsion decreased, till with 30 per cent. of air and 6 per cent. of oxygen respectively it ceased to occur. 9. Reflex and excitement movements were most likely to arise either with pure nitrous oxide or with nitrous oxide mixed with small percentages of air (from 3 to 7 per cent.), or with nitrous oxide mixed with considerable percentages of air (from 20 to 30 per cent.), or oxygen (from 10 to 20 per cent.). They were least likely to assert themselves with mixtures containing moderate quantities (from 12 to 16 per cent.) of air or moderate quantities (from 3 to 7 per cent.) of oxygen. 10. Phonated sounds were most common when nitrous oxide was administered with large percentages of air (from 12 to 30 per cent.) or oxygen (20 per cent.). When nitrous oxide was administered pure or with small percentages of air (from 3 to 5 per cent.) they were met with to a moderate extent only. Phonation was least likely to arise with nitrous oxide and air mixtures when air was present to the extent of from 6 to 10 per cent., and with nitrous oxide and oxygen mixtures when oxygen was present to the extent or from 3 to 11 per cent. 11. The duration of available anæsthesia after inhalation was found to be longest after the administration of mixtures containing from 3 to 11 per cent. of oxygen, the maximum duration having been attained with 7 per cent. mixtures. With nitrous oxide and air mixtures the resulting anæsthesia was distinctly longer than with pure nitrous oxide, but the results were very uncertain in these cases. The shortest available anæsthesia was recorded with nitrous oxide alone and with nitrous oxide mixtures containing 30 per cent. of air. 12. In estimating the respective merits of the various mixtures used as anæsthetic agents the investigation showed that the best results were obtained with mixtures of nitrous oxide and oxygen, the next best with mixtures of nitrous oxide and air, and the worst with nitrous oxide free from air or oxygen. Air was not nearly so suitable as oxygen for eliminating the asphyxial factors of a pure nitrous oxide administration owing to the large volume of useless nitrogen which must necessarily be inhaled. The nitrous oxide and air cases were, as compared with those of nitrous oxide and oxygen, far more uncertain in their course. 13. There was no one mixture of nitrous oxide with air or with oxygen which would successfully anæsthetise every patient. 14. In order to obtain the best form of anæsthesia oxygen should be administered with nitrous oxide by means of a regulating apparatus, the percentage of the former gas being progressively increased from 2 per cent. or 3 per cent. at the commencement of the administration to 7, 8, 9, or 10 per cent., according to the circumstances of the case. The longer the administration lasted the greater might be the percentages of oxygen admitted. 15. The next best results to those obtainable by means of a regulating apparatus for nitrous oxide and oxygen were to be secured by administering certain constant mixtures of these two gases. Mixtures containing 5, 6, or 7 per cent. of oxygen were the best for adult males and mixtures containing 7, 8, or 9 per cent. the best for females and children. 16. The next best results to those last mentioned were to be obtained by means of mixtures of nitrous oxide and air, from 14 to 18 per cent. of the latter being advisable in anæsthetising men and from 18 to 22 per cent. in anæsthetising women and children. 17. Paul Bert, whose valuable researches upon the effects produced by the inhalation of nitrous oxide and oxygen were well known, regarded an increased atmospheric pressure as essential to the production of anæsthesia by means of these gases. It was clear, however, from the foregoing investigation that deep and satisfactory anæsthesia unaccompanied by any obvious asphyxial manifestations might be secured at ordinary pressures by mixtures of nitrous oxide and oxygen containing even as much of the latter gas as was present in our atmosphere. 18. The last-mentioned fact would seem at first sight to give a death-blow to the asphyxial theory of nitrous oxide anæsthesia—a theory which supposes that this gas produces its anæsthesia by limiting or arresting normal oxidation processes within the central nervous system. But because no *obvious* asphyxial manifestations made their appearance during the inhalation it was not justifiable to assume that no such interference with oxidation was taking place.

Dr. J. S. HALDANE, after complimenting Dr. Hewitt on his research, said that the paper proved that in some cases at any rate the gas had a specific anæsthetic action and that the anæsthesia was not due to asphyxia. Nevertheless, in the cases where Dr. Hewitt used only a small percentage of air or nitrous oxide the times for producing unconsciousness (55 seconds) corresponded with those which Dr. Haldane had found to occur with the inhalation of nitrogen or hydrogen. He was satisfied that it was possible to produce anæsthesia by the inhalation of pure nitrogen, but the duration of anæsthesia was too small to allow of it being usefully employed in surgery.

Mr. JOHN FAIRBANK said that Dr. Hewitt's paper would be of great use to those who wished to employ the method. He could fully confirm what had been said as to the advantages of the administration of combined gas and oxygen. It was easy to administer and the comfort of the patient both during inhalation and during recovery of consciousness was increased. Mr. Fairbank also thought that there was less liability to the occurrence of spasmodic closure of the air-passages after the administration was suspended than with pure nitrous oxide.

Dr. R. L. BOWLES said that the subject had a great interest for him as in 1855 he was engaged with the late Dr. Marshall Hall in experimenting on the subject of asphyxia with mice. If mice were put into pure nitrogen or hydrogen they died in violent convulsions, but if a small percentage of air, too little to allow a light to burn, were mixed with the nitrogen the animal lived. But if they were put into a bell jar containing pure oxygen they lived only a certain time and died poisoned by carbonic acid, although the bell jar still contained enough oxygen to make a spark of tinder incandescent. He was much interested in Dr. Hewitt's classification of cases of stertor which closely corresponded with what Dr. Bowles had described to the society 39 years ago.

Mr. G. ROWELL said that the truth of Dr. Hewitt's conclusions would be apparent to anyone who had had experience of the method he advocated. There were one or two points which were open to criticism. Dr. Hewitt gave as the test of the close of the period of anæsthesia the ability of a patient to respond to some simple request, such as "Open your eyes." Mr. Rowell held that the crucial point was the recollection of the request by the patient which would not be for an appreciable time later, as the patient would respond to simple directions in a reflex kind of way before consciousness was restored. He thought that the length of anæsthesia depended not only on the anæsthetic given but on the amplitude and rate of respiration at the time the mask was removed. If respirations were deep and rapid the anæsthesia passed off quickly. He agreed that the best results were obtained by giving oxygen in progressively increased percentage, but next in value to that he would put the initial administration of pure nitrous oxide till the stage of excitement had passed off and then give occasional inhalations of pure air at regular intervals.

Mr. H. J. PATERSON said that the behaviour of the same patient to the same anæsthetic varied on different occasions. Want of sleep especially hindered the production of anæsthesia, as he had often noticed in giving gas to night nurses. As to the "analgesic borderland" before recovering consciousness, he mentioned a case in which gas and oxygen were being administered for a long time for removal of varicose veins. The administration had to be suspended and the patient talked and even sat up and looked at what was being done and appeared to feel no pain. He was again anæsthetised and on recovering consciousness had not the slightest recollection of the proceedings. He believed that there might be an internal asphyxia although there was no outward evidence and that the retching and the sweating which occurred were evidence of this.

Dr. HEWITT, in reply, said that he had administered nitrogen at the request of Sir George Johnson who held the asphyxial theory strongly and the symptoms were outwardly

identical with those of nitrous oxide anæsthesia. If 7 per cent. of oxygen were added to the nitrogen it was possible to produce sufficient anæsthesia for the extraction of a tooth. He thought that the differences observed in anæsthetising the same patient were often due to differences in the anæsthetist. Waller's experiments seemed to show that carbonic acid was not so toxic as had been believed and he found it difficult to accept the "internal asphyxia" theory as he did not see what there was to prevent the free passage out of carbonic acid. Nitrous oxide was easily absorbed by the blood and appeared to diminish the oxygen-carrying powers of the red cells and also to have a specific action on the brain.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Feb. 13th, the President, Mr. EDMUND OWEN, being in the chair.

Mr. W. WATSON CHEYNE exhibited two cases of Coxa Vara showing the result of operation. The first patient was a boy, aged nine years, who was first seen at the age of three years with deformity clearly referable to curvature of the neck of the femur and chiefly characterised by marked eversion of both legs and greatly diminished inversion. The trochanters were at the level of Nélaton's line. On Jan. 23rd, 1893, an incision was made on the outer side of one thigh at the upper part down to the bone, the femur was sawn transversely below the trochanters, and the foot and leg were forcibly inverted till the normal degree of complete inversion was obtained, and it was afterwards held in that position by an oblong perforated aluminium plate applied over the outer side of the femur at the point of division of the bones and nailed over the two fragments with nickeled tintacks so as to keep up the inversion. The wound healed by first intention. The case was shown at the Clinical Society on Nov. 24th, 1893,[1] under the title of "External Rotation of Both Legs." On Jan. 7th, 1896, the boy was admitted to Paddington Green Children's Hospital with an abscess at the seat of the former operation, on opening which the plate and tacks were found to be loose and were removed. The leg operated on was now in perfect position and as useful to him as if there had never been anything the matter with it, and the condition in the other leg had greatly improved. The second patient was a girl, aged five years, who had been more than once in Paddington Green Children's Hospital for incipient rickets and was admitted for operation in January, 1897, when three years of age. At that time there were all the signs of coxa vara in both legs; there were marked eversion of the legs (inversion even to the right angle was impossible), difficulty in abduction, and lordosis. The trochanters were at the level of Nélaton's line; there were anterior curvature of the femur and flat feet, and the child walked with a waddling gait and the knees tended to cross one another. On Jan. 26th, 1897, the right femur was divided below the trochanter, the lower fragment was inverted, and the bones were fastened together with an aluminium plate as in Case 1. Union occurred by first intention. There was now a good leg on the side operated on and also improvement in the usefulness of the other leg. The aluminium plate is still present in the leg.—Mr. JACKSON CLARKE said that he had seen the second case before operation and could confirm the great improvement in posture and gait which had been brought about. He had had four cases of the kind under his care. Of these three had active rickets at the time and were treated by the application of an instrument to keep the foot looking forward and by a perineal band, and they all improved so much that no operation was necessary. In the fourth case there was pain in the hip and it was treated by rest and extension and the symptoms subsided. In adults he thought that removal of a wedge-shaped piece of bone might be desirable.

Dr. ROBERT MAGUIRE showed a case of recovery after operation for Cerebellar Abscess. The patient, a young man, aged 27 years, was seen in private consultation on March 2nd, 1896. He had suffered from discharge from the right ear for some time and suddenly, as the result of a chill, the discharge ceased, the patient complained of pain in the right side of the head behind the ear and became rapidly comatose, showing first convulsive movements of the left side. When first seen on March 2nd he was comatose, the head was turned slightly to the right, the left arm and leg were flaccid, the mouth was turned slightly to the right, and the right pupil was larger than the left. He could be roused sufficiently to give a stupid monosyllabic answer. The temperature was then 101° F. Operation with the existing surroundings being impossible he was removed to St. Mary's Hospital in the afternoon of the same day and on arrival showed in addition to the symptoms mentioned distinct weakness in the right arm and leg. On March 3rd Mr. Pepper operated by trephining behind the right ear. The dura mater and pia mater and also the superficial cerebellar substance seemed to be normal, but on cutting through about a quarter of an inch of cerebellar substance an abscess was reached and about two ounces of pus were evacuated. Next day the patient was conscious and answered questions rationally. There was still a little weakness of the left side, the right side being normal. The temperature after the next two days fell to normal. Convalescence was uninterrupted and the patient was discharged cured on April 20th, 1896. He had had no bad symptoms since.—Dr. STCLAIR THOMSON asked if there was any reason why the mastoid was not opened as the infection would probably pass by way of the mastoid. If that were so and it were left it would be a source of future danger. He asked if the trephined bone had been replaced.—Dr. MAGUIRE, in reply, said that owing to the patient's condition it was considered best to relieve the abscess at once. The inflammation could not have reached the cerebellum by direct extension as both the dura mater and the surface of the cerebellum were free from inflammation. The trephined bone was not replaced.

Dr. STCLAIR THOMSON showed a case of Pharyngomycosis Leptothricia, but probably more correctly called Keratosis Pharyngis. The patient, a man, aged 38 years, showed on the faucial and lingual tonsils the characteristic appearances of what was generally termed pharyngomycosis leptothricia. The crypts of the tonsils were occupied by small, isolated, tough, firmly adherent, white excrescences which did not coalesce, and the mucous membrane beneath and between them was apparently healthy. These white masses sometimes projected above the mucous surface in the form of tufts, brushes, or stalactites. They were very adherent and generally broke off short when seized with forceps. The outgrowths recurred rapidly on being removed and the affection might be very persistent. If left untreated it generally disappeared and left no trace behind, but it is said to have lasted for five and even eight years. It was limited in distribution to the fauces. It had generally been attributed to the growth of the mycosis leptothricia. But the spores and even the mycelium thread of this fungus were nearly always present in the mouth and pharynx. The attempts of Brown Kelly to inoculate it in his own throat always failed. Dr. Thomson considered that the mycotic element was of secondary importance and that the fundamental pathological condition was a cornification of the epithelium lining the tonsillar crypts. He had found no local application of any avail.—Mr. WATSON CHEYNE asked what other structures besides organisms were present, especially if there were many epithelial scales.—Dr. DE HAVILLAND HALL agreed that the cases were of very little inconvenience except to voice-users. He had seen good results from the application of a 15 per cent. solution of salicylic acid in alcohol.

Dr. HECTOR MACKENZIE showed a case of very large Thoracic Aneurysm. The patient was a man, aged 44 years. When first seen two years ago there was no visible aneurysmal tumour, but there were dulness and pulsation in the second right intercostal space close to the sternum and sharp pain in front of the chest. He followed his ordinary occupation as a labourer and three months ago he returned with a large pulsating swelling in the upper part of the chest measuring seven inches transversely and five and a half inches vertically, while it projected two and a half inches above the surface of the chest wall. The swelling was soft. The greater part of the gladiolus and the attached cartilages on the right side had been absorbed and on palpation there was a very diffuse and heaving systolic impulse followed by a diastolic shock. No murmur was audible. The tumour had considerably increased in size in the three months during which the patient had been under observation. The case was shown on account of the exceptional size of the tumour and the comparative insignificance of the symptoms to which it

[1] Transactions of the Clinical Society of London, vol. xxvii.

gave rise. The pain was now very much less than it was two years ago. The patient did not feel ill enough to go into the hospital but he found the shortness of breath and pain produced by exertion rather trying.—Dr. DE HAVILLAND HALL related a similar case now under his care at the Westminster Hospital. Under treatment by rest, restricted diet, and iodide of potassium the man got worse and Dr. Hall was now trying a method of treatment recommended by Lancereaux, the injection into the subcutaneous tissue of the buttock of a 1 per cent. solution to gelatin in normal salt solution, beginning with 50 cubic centimetres. He had given five injections, the last being one of 200 cubic centimetres. The injections caused little inconvenience but it was too soon to judge of their effect.—Dr. MAGUIRE thought that the patient had done well to refuse in-patient treatment as he had never seen patients able to return to work and earn a living as this man had done after prolonged rest. The recumbent posture made the aneurysm press against the œsophagus and not improbably favoured the occurrence of rupture into that tube.

Dr. HECTOR MACKENZIE showed a man, aged 32 years, suffering from Graves's Disease who showed all the usual symptoms. He was admitted into St. Thomas's Hospital on Jan. 17th, 1899. He had always been of a nervous temperament and suffered from an attack of nervous depression in 1882. About six months ago he noticed puffiness over the eyes for which he consulted a medical man and in December, 1898, he observed that his eyes were protruding and his medical attendant noticed that his throat was swollen. When shown the eyes were prominent and when the patient looked down there was marked lagging of the upper lid. On admission when the lids were closed they did not quite meet, but this was now diminishing. The enlargement of the thyroid was considerable, soft, and symmetrical. The circumference of the neck was 15 inches. A loud blowing systolic murmur was audible over the goitre. The pulse-rate varied between 90 and 120. There was marked carotid pulsation in the neck and there was a very rough systolic murmur best heard in the situation of the third left costal cartilage. The disease was rare in males, the comparative frequency of the disease in this country in the two sexes being about one to 20. It was possible that occupation and mode of life might act as exciting causes. Two of the other male patients whose photographs were shown were, like the present subject, railway servants. It was stated that exophthalmic goitre was not infrequent in the Russian army. Occasionally in cases of this disease some substance was present in the urine which was not glucose but reduced Fehling's solution. The patient showed one very interesting symptom which Dr. Mackenzie had not previously observed—itching of the skin. This itching had been very troublesome for some months so that the patient had "to scratch himself like a monkey." The interest of this symptom lay in the circumstance that it was not uncommonly met with during the process of treating myxœdema by means of thyroid preparation and was often a cause of a considerable amount of suffering in these cases.—Mr. WATSON CHEYNE said that he had operated on about 12 cases, several of them being males, removing half the thyroid. Tremor and palpitation were relieved in almost all cases, so that a sempstress was able to resume her sewing and another patient was delighted because he was again able to play "nap." No improvement took place in the proptosis.—Dr. R. MAGUIRE said that in cases of Graves's disease and in cases of palpitation possibly of the same nature he had found great benefit to result from the administration of tincture of cactus grandiflora.—Dr. ALEXANDER MORISON said that many of these cases improved in time irrespectively of treatment. He mentioned one case which he had seen seven years ago. The patient was not then put under treatment and disappeared from observation till recently when the symptoms had subsided. He thought that the neurotic element was the most important and that the hypersecretion of the thyroid was secondary.—Dr. WILFRED HADLEY said that he had tried to follow the subsequent course of cases which had been under treatment and he thought that the symptoms often subsided in course of time. In a few the nervous symptoms became more pronounced and the patients went to asylums, and a few died from some other complaint.—Dr. MACKENZIE, in reply, said that the mortality directly due to operation appeared to be considerable (12 per cent.) and the results were not much better than were obtained by other measures.

Mr. V. WARREN LOW showed a case of Subcoracoid Dislocation of the Head of the Left Humerus, with Fracture of the Great Tuberosity. The patient was 51 years of age. On Oct. 30th of last year he slipped and stumbled down some 15 or 20 steps, falling in a heap at the bottom and striking his left shoulder. He did not suspect that his shoulder had been seriously injured till he arrived home and on taking off his clothes noticed that there was very considerable swelling and bruising in the region of the joint and also that the "point of his shoulder" (acromion process) was abnormally prominent. Next morning it was found that the left shoulder was very considerably swollen and bruised, but that the head of the bone was absent from its normal position and could be felt below and to the inner side of the coracoid process, the axis of the humerus being correspondingly altered; no signs of fracture could be detected and an unsuccessful attempt was made to reduce the dislocation. He was then admitted into hospital. For the next fortnight the joint was too painful to allow of any examination being made without an anæsthetic and as the Roentgen ray apparatus was unfortunately at this time under repair no further investigation was made, the man being kept in bed with his arm on a pillow while evaporating lotions were applied. As his arm was absolutely useless Mr. Owen on Nov. 21st cut down on to the head of the bone, using the ordinary anterior incision for excision of the shoulder-joint. There were quantities of soft blood-clot both around and inside the joint capsule, while the following conditions were also found to be present: (*a*) subcoracoid dislocation of the head of the humerus; (*b*) the great tuberosity had been completely torn from the humerus and broken into a number of small fragments; and (*c*) a small piece of the lower and inner part of the glenoid fossa had been broken off. There was, however, no fracture of the surgical neck of the bone. As even with the head of the bone thoroughly exposed it was impossible for some reason to restore it to its normal position Mr. Owen removed the head by sawing through the surgical neck and closed the wound. The man's recovery was uneventful, the wound healed by first intention, and he left the hospital on Dec. 7th with some slight movement between the humerus and the scapula.—Mr. JACKSON CLARKE related the case of an elderly woman who had had her shoulder "out" for five weeks before he saw her. As reduction by manipulation under an anæsthetic was impossible Mr. Clarke cut down and found much the same state of things as in Mr. Low's case. Without opening the capsule the head of the bone was pulled into place and the œdema of the arm which had been considerable before the reduction passed off. About two weeks later the œdema returned and the bone was found to have slipped out of place, probably three days before Mr. Clarke saw her. The bone was easily replaced, but the œdema did not subside, no doubt because thrombosis had taken place. The head of the bone was excised, but the œdema persisted in spite of patient treatment and ultimately the arm had to be removed. Probably it would have been wiser to have opened the capsule and wired the fragments in the first instance.

CLINICAL SOCIETY OF LONDON.

Tuberculous Cavities in the Lung giving rise to Metastatic Abscesses.—Myopathy.—Results of Operation for Enlarged Prostate.

A MEETING of this society was held on Feb. 10th, the President, Mr. LANGTON, being in the chair.

Mr. W. G. SPENCER described an exceptional case of Tuberculous Cavities in the Lungs giving rise to Gaseous Metastatic Abscesses, in which abscesses formed in the back, in the right pleura, and in the upper part of the left thigh, the latter bursting into the rectum through the great sciatic notch, the disease of the lungs giving rise to neither symptoms nor signs. The patient was a West African negro, aged 22 years, who was attended by Dr. Denne for pain in the left knee, frequent headaches, and vomiting, which he had had for eight months. A large superficial abscess extending from the left scapula to the lowest rib was opened, but no communication with the chest was found. As the patient still had fever he was admitted to the Westminster Hospital, where a tympanitic swelling was found occupying the upper portion of the left thigh and buttock.

On opening this multiloculated abscess gas and pus with a fæcal odour escaped and it was found to communicate with the pelvis through the great sciatic notch. There was no ulceration of the rectum and no infiltration of the ischio-rectal fossæ. Later the patient suddenly developed an acute effusion into the right pleura. The fluid aspirated having a fæcal odour and containing pus cells, the right pleura was consequently drained. Then followed a period in which the patient declared himself better; the abscesses in the back and the pleural wound were nearly closed and the man insisted upon getting up and asked repeatedly to be discharged. The septic fever, however, continued and foul yellow pus was discharged from the thigh in spite of frequent irrigation. All the evidence of chest disease was an occasional cough and a few râles. Yet malaria, dysentery, typhoid fever, and fæcal fistula from intestinal ulceration appeared to be clearly negatived. One day, after being five months under observation, the patient suddenly collapsed and died in four hours. Post mortem there was found a tuberculous cavity in the upper part of the right lung of the size of an orange filled by a gummy purulent fluid, whilst the rest of the right and the left lung contained numerous caseous tubercles; there was extensive tuberculous caries of the sixth, seventh, and eighth ribs in the left side and of the eighth and ninth ribs on the right side; the right pleura was thickened and adherent; and the upper part of the left thigh and buttock were completely occupied by multilocular abscess cavities. There was no tuberculous ulceration of the intestines.—Dr. KINGSTON FOWLER said that he had never met with a similar case and he asked whether tubercle bacilli were found in the cavities in the lung. He had also never before heard of fœtid collections in the pleura apart from gangrene or perforation of the lung.—Mr. G. H. MAKINS said that there must have been a mixed infection. Tuberculous abscesses were not fœtid. It was possible that the abscesses were not directly traceable to the pulmonary lesion.—Dr. J. H. BRYANT asked if any anaerobic cultures were made. In a number of cases in which there had been formation of gas the bacillus aërogenes capsulatus had been found. This occurred in one case in which the knee-joint was injured and suppurated with evolution of gas and in a case in which gaseous cavities were found in the liver, in a case of pneumothorax without perforation f the lung, and also in a case of "pneumaturia" in a diabetic patient. The bacillus coli communis had been found by Dr. Pakes in a case under Dr. Bryant's care in which there were gaseous abscesses of the liver, and he believed that they caused the evolution of gas.—Mr. SPENCER, in reply, said that colon bacilli were found in the pus of the abscesses and tubercle bacilli were demonstrated after death in the pulmonary cavities. During life there was no expectoration, and so there was no possibility of demonstrating them. He thought that the ribs had been affected secondarily to the lungs, and that the abscess in the back might have been due to extension from the rib, but that the others were metastatic.

Dr. THOMAS BARLOW and Dr. F. E. BATTEN read a paper on a case of Myopathy with Necropsy in a boy, aged five years. The patient was shown at the Clinical Society in November, 1894, and the following account of the case was given: "The boy had suffered from weakness of the back and legs since birth, he has never talked clearly, but is considered fairly intelligent, he has never had any severe illness. He was a healthy baby and nothing was noted to be amiss till the time when he should have begun to walk. No similar affection occurred in any member of the family except possibly his sister (seen by one of us, T. B.), in whom it is noted that the pectorals and deltoids are small." On admission to the hospital the following note was taken: "He is an intelligent-looking boy, his face, eyes, mouth, and tongue present nothing abnormal. His speech is of the type known as 'idioglossia.' He sits up in bed and holds the back very straight; if placed on his back he is unable to raise himself into the sitting position without turning on to his face. The child is unable to stand and the legs are flexed at the hip and knee. The muscles are everywhere very weak and thin and have a tough feeling. In the upper limbs all movements seem capable of being performed. The latissimus dorsi and pectoral muscles are very wasted; the infraspinatus is comparatively good. In the lower limb both limbs are equally wasted, no hypertrophy, all movements capable of being performed but the legs cannot be fully extended. The knee-jerks are present, equal and active. Sensation is normal to all forms, and the electrical examination shows only a diminution to both faradaic and galvanic elements." The boy developed an attack of gastro-enteritis and died. At the necropsy some defect in the arches of the lower lumbar vertebræ was found; the spinal cord and brain appeared normal. The pectoral muscles were very poorly developed, the serratus was small, the biceps was fairly developed but was pale, and the rectus abdominis muscle appeared normal. The glutei were converted into a mass of fat, and the rectus femoris was poor and thin. Microscopically no lesion could be found in the brain, medulla, and spinal cord. The anterior horn cells appeared quite normal except for the deposit of some pigment which does not usually occur in young subjects. The medullated sheath of the anterior root fibres appeared to be thinned out and not possessed of the regular contour of the normal fibres. In the muscles the following changes were found. There was extreme variation in the size of the muscle fibres, some being considerably larger than normal, and increase in the interstitial tissue between the fibres. Vacuolation was seen in some fibres and a very considerable deposit of fat between the fibres, while a fine granular (? fatty) change was found within certain muscle fibres, rendered apparent by staining in Marchi's fluid. The muscle spindles formed a striking feature in sections of the muscles and were apparently normal. The sensory nature of these organs were no longer doubtful, and it was argued that if it could be proved that these organs remained abnormal while the rest of the muscles underwent atrophy, then it was probable that the primary lesion in this disease lay in that part of the nervous system where the motor and sensory paths pursue separate routes. The authors assigned the case to the group known as the Leyden-Möbius, although hereditary history was wanting in the present case. The muscular atrophy corresponded to the late pseudo-hypertrophic type. Dr. Barlow added that when he showed the boy as a living case to the society he regarded it as a case intermediate between the form of myopathy described by Erb and the older form of pseudo-hypertrophic paralysis described by Duchenne, and Dr. Batten's investigations confirmed this view. At that time the toughness of the muscles, especially in the lower limbs, was very marked. Although there was no history of the disease in older relatives it was yet possible that others in the family might develop signs of it. Limitation of movement on the hip was so marked that some who had seen the patient were inclined to attribute the wasting in the lower limbs to some joint disease. But he felt sure that it was due to contracture secondary to the muscular weakness, particularly from having seen marked limitation of movement in one hip in a previous case of undoubted pseudo-hypertrophic paralysis where it was clearly due to muscular rigidity. He thought that the microscopic appearances supported the view that the changes were developmental, there being a proneness to degeneration of the muscular fibres which came on earlier in some cases than in others. The absence of the laminæ of the lower vertebræ in the present case also pointed a little in this direction.—Dr. C. E. BEEVOR thought that the significance of hypertrophy had been exaggerated by most writers. In Meryon's cases which were published before Duchenne described the disease there was no hypertrophy. He thought that all forms of myopathy were essentially the same.—Dr. BERTRAM ABRAHAMS agreed that all cases of myopathy were of the same nature. The occurrence of hypertrophied and atrophied fibres in the same section of muscle was similar to a condition seen in the nerve trunks from cases of disseminated sclerosis where swollen and shrunken nerve fibres were seen side by side. He asked if Dr. Batten had found any changes in the motor nerve endings as described by Babes in his atlas.—Dr. SAVILL asked for more explicit information as to the changes in the cauda equina. He thought that there was a real nervous change in these cases affecting the lower motor neuron and not that they were not dealing with a primary muscle degeneration.—Dr. BATTEN, in reply, said that he had not examined the motor nerve endings as it was not possible to stain them in post-mortem specimens. The specimens showed slight changes in the nerve roots as they left the cord, but these could not be traced in the nerve trunks.

Mr. J. R. LUNN gave an account of some results of Operations for Enlarged Prostate. Mr. Lunn said that he had been led to perform this operation by reading the successful case recorded by Mr. Arthur Hunt in THE LANCET of Oct. 3rd, 1896. Case 1.—A man, 62 years of age, was admitted to St. Marylebone Infirmary for enlargement of the prostate and retention. The left vas was removed in May,

1896, and as no improvement ensued the right testis was removed in August, 1896. In August, 1897, the left testis was removed and considerable improvement in the frequency of micturition was experienced. In December, 1898, he developed dropsy and died. Case 2.—The patient was a man, aged 63 years. In February, 1897, section of the right vas was performed with some relief, and in June, 1897, the other vas was removed; a month later the patient was able to go the whole night without emptying his bladder. Case 3.—A man, aged 63 years, had both testicles removed in January, 1897, for tuberculous disease of the epididymis. The prostate was somewhat enlarged at the time of the operation, but at the end of six months it had shrunk in a very marked manner. Case 4.—A man, 66 years of age, had suprapubic drainage performed for retention of urine due to stricture. The prostate was felt to be enlarged. Later double castration was performed and didymin tabloids were given; he improved remarkably, but he died from diarrhœa six months after the operation. Case 5.—A man, aged 76 years, suffered from frequent micturition, &c., due to enlarged prostate. Each vas was excised under the local influence of eucaine and the patient was greatly relieved, but he died six months afterwards from cancer of the liver. Case 6.—The patient was a man, aged 64 years, on whom double vasectomy was performed for enlarged prostate with great improvement of symptoms.—The PRESIDENT said that long before this operation was recognised he saw a patient 68 years of age who had tuberculous disease of the right testis and enlargement of the prostate. He removed the testis and when the patient returned four years later on account of similar disease in the left testis the right side of the prostate had undergone considerable shrinkage. The left testis was excised and when seen a few years later the prostate was very much smaller and the patient was very little inconvenienced. He was now 87 years of age and was able to get about comfortably. He asked whether there had been any mental symptoms following the operations.—Mr. W. G. SPENCER said that in some cases the relief to the retention and the backward pressure on the kidney appeared to have been only temporary and it seemed doubtful whether bladder drainage through a suprapubic or a perineal incision was not required as well. He asked whether there were any "eunuchoid" symptoms such as obesity, or thinning or loss of the beard.—Mr. LUNN, in reply, said that none of these cases exhibited any mental symptoms although several of them became very fat.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Extra-Uterine Pregnancy.

A MEETING of this society was held on Feb. 9th, Dr. MACNAUGHTON JONES, President, being in the chair.

Dr. BANTOCK showed two specimens of Fibroid Tumour of the Uterus, the first removed by panhysterectomy and the second by the use of the serre-nœud.

Dr. SNOW showed a Myoma removed by abdominal hysterectomy; he had adopted a new plan of dissecting off a thin layer of uterine tissue with the flaps instead of making them of peritoneum only. He also showed a small Myoma removed per vaginam.—Remarks on the specimens were made by Mr. BOWREMAN JESSETT, Dr. EDGE (Wolverhampton), Dr. WALTER (Manchester), and the PRESIDENT.

Mr. MAYO ROBSON (Leeds) read a short paper on the Complete Removal of the Fœtus and Sac in a case of Advanced Extra-Uterine Pregnancy. Leaving aside the questions of pathology and classification of extra-uterine pregnancy and also the question of treatment in the early months, he confined his remarks to the narration of a case and the discussion of the treatment of advanced pregnancy with special reference to the sac. Operation in this case was undertaken two months after full term, the fœtal movements having ceased at term. He incised the sac and removed the fœtus. Finding it would be possible to remove the entire sac he ligatured off the ovarian vessels externally and made a pedicle between the uterus and the sac internally. After separating the anterior layer of the meso-sigmoid which was expanded over the sac the tumour could be shelled out from its bed. The patient made a good recovery. Mr. Robson proceeded to quote a passage from a recent text-book to show that removal of the entire sac was not worth considering after the fourth month. Mr. J. W. Taylor in his Ingleby Lectures described the removal of the sac in intra-ligamentous pregnancy as unnecessary and dangerous. Kelly, on the other hand, advocated the removal of the sac whenever it was practicable. He would suggest the following general rules. When the fœtus was found among the intestines and had been removed, if the placenta was attached to the expanded tube it could probably be removed, but if spread over the intestines or large vessels it was safer to leave it and pack the placental area with gauze. If the fœtus was enclosed in a sac, then after extraction of the former the sac should be examined to see if its removal was practicable. The preliminary securing of the uterine and ovarian arteries would simplify the subsequent procedures. It would do no harm if very adherent portions of the sac were left if their detachment presented unusual difficulties.

Dr. MACPHERSON LAWRIE (Weymouth) read a short paper on a case of Ectopic Gestation which he recorded as a possible instance of ovarian pregnancy.

In the discussion on these two papers the PRESIDENT elicited from Dr. Lawrie that there was no critical proof that it was a case of ovarian ectopic gestation nor was it shown that any corpora lutea were contained in the tissue examined.—Mr. BLAND SUTTON emphasised the distinction to be drawn between the cases where the pregnancy was abdominal, in which the sac was formed only by fœtal membranes, and those in which it was intra-ligamentous, when the tissue of the broad ligament entered into the formation of the sac. The former were rare; he had only seen one out of 16 cases of advanced ectopic pregnancy; in these cases the sac could be removed without difficulty. But when intra-ligamentous the removal of the sac was a formidable matter and should not be attempted.—Dr. BANTOCK concurred with Mr. Bland Sutton's views. The first case he saw was one in which the live fœtus was lying within its amniotic sac in the general peritoneal cavity. The attachments of the placenta were such that any attempt to remove it must have proved disastrous. He had seen only one case of rupture into the broad ligament and the case showed that the proper treatment was opening the sac, emptying it of its contents, stitching it to the parietes and draining.—Dr. WILLIAM WALTER (Manchester) pointed out the great difference there was in operating on advanced cases of ectopic pregnancy after the fœtus was dead. To remove the sac under those circumstances was not attended by the same danger as when the fœtus was still living.—Dr. F. EDGE said he had had the pleasure of hearing Mr. Taylor deliver the Ingleby Lectures which marked a step in their knowledge of the subject. In tubo-abdominal cases it was pointed out that the sac and placenta were almost entirely tubal and that the vessels were ovarian and uterine; if these supplies were controlled the case was in the surgeon's command.—Dr. ARTHUR GILES thought the distinction between the two kinds of sac so clearly drawn by Mr. Bland Sutton was of the greatest importance. In corroboration of Dr. Walter's remarks he mentioned a case of ectopic intra-ligamentous pregnancy at five months in which the fœtus had been dead about two weeks; here he was able to remove the entire sac.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases.—Idiopathic Dilatation of the Stomach.

A MEETING of this society was held on Feb. 9th, the President, Dr. MACFIE CAMPBELL, being in the chair.

The report of a committee to the effect "that house surgeons be allowed to charge fees for reports under the Workmen's Compensation Act and that such fee should be a guinea when the report is for an insurance company or employer of labour" was adopted.

Mr. THELWALL THOMAS exhibited a patient from whom he had removed an Epithelioma of the Larynx by Thyrotomy.

Mr. T. H. BICKERTON showed a patient, aged 51 years, on whom he had performed the "grattage" operation for severe Trachoma. The disease was of long standing, the cornea were opaque from "pannus," and for 21 months he had been unable to follow his employment. He could only count fingers. The cornea of the right eye (the only one operated upon) was clear and his vision was $\frac{6}{12}$ and Jaeger 8.—Dr. ALEXANDER, Mr. RICHARD WILLIAMS, and Mr. RUSHTON PARKER spoke.

Dr. T. R. GLYNN read a paper on the Symptoms and

Treatment of Idiopathic Dilatation of the Stomach. He considered no single symptom or symptoms as pathognomonic. Some cases originated from hyperchlorhydria. Vomiting was more particularly discussed and its absence in many cases was noted. Gastric crises and constipation or diarrhœa as a crisis of purging in the morning or as a chronic affection with much mucus in the evacuation was often present. As general symptoms neurasthenia, a flabby abdominal wall, with tendency to hernia, and moveable right kidney were mentioned. The disease was frequently met with in young men between 18 and 30 years of age. He considered that the affection occurred almost invariably in the neurotic. Treatment should be directed to the nervous system and be general rather than local. He advised caution in the use of the stomach tube.—Mr. RUSHTON PARKER had explored one case of dilated stomach which proved to be idiopathic dilatation, although the patient had suffered from symptoms referable to gastric ulcer. The pylorus was found to be patent and readily dilatable and the abdomen was closed. Cessation of symptoms followed this and four months later the man appeared quite well.—Dr. ARCHER had met with a considerable number of cases in a minor degree in young men and women. He thought irregularity of meals and want of exercise conducive to the production of dilatation of the stomach and that there was often atonic dilatation of the intestines present. He had found nux vomica and the mineral acids useful.—Dr. IMLACH alluded to the striking contrast in the modern views as to surgical interference.—Dr. GILL, Dr. GRÜNBAUM, Dr. DAVIES, and Mr. PAUL spoke.

Report of the Tuberculosis Committee.

The following report was presented by this committee:—

Origin of the committee.—At a meeting of the Liverpool Medical Institution held on Dec. 1st, 1898, it was unanimously resolved: "That a committee be appointed to consider what further steps can be taken for the prevention of tuberculosis in the city of Liverpool and for the treatment of the disease in the human subject and to report thereon to the institution."

Retrospective.—The committee desire to express their satisfaction that tuberculosis has declined in so remarkable a degree during the last thirty years. This diminution they attribute for the most part to the improved industrial social and moral conditions of the people and to the better sanitary state of their homes and general surroundings. The latter is mainly the result of the enlightened action of the City Council in promoting the sanitation of the city and the committee are of opinion that the extension of the same policy will tend to reduce still further the prevalence of tuberculosis. These measures have, however, been carried out with a view to the improvement of the general health of the community rather than to the prevention of tuberculosis; and their influence, though considerable, has been less conspicuous on the prevalence of this than of other forms of preventable disease. Measures adopted specially to deal with the infection of tuberculosis—namely, the inspection of the milk- and meat-supply and the enforcement of stringent regulations with regard to shippons—have been attended with obvious benefit. The reduction in the mortality from tuberculosis which has resulted from the efforts hitherto made to improve the health of the community encourages the committee to believe that a much greater and more rapid diminution might be expected to follow the adoption of further measures especially designed to cope with it, and the committee, in accordance with their instructions, have framed the following recommendations to that end:—

1. *Diffusion of information respecting tuberculosis.*—A disease which affects at least one-tenth of the population can only be adequately dealt with by enlisting the enlightened coöperation of the people themselves. The committee therefore recommend that further steps should be taken to make the people of Liverpool acquainted with the main facts concerning the nature, causes, prevention, and treatment of the disease. With this object in view they have drawn up a statement which they suggest should be widely circulated by the health authorities through suitable channels. In this statement special stress is laid on the value of fresh air and sunshine in the prevention and cure of tuberculosis and on the importance of destroying the sputa of consumptives.

2. *The arrest of tuberculosis by diminishing the sources of infection, &c.*—With regard to the organised steps which might be taken to arrest the spread of tuberculosis the committee attach the highest importance to all measures which tend to improve the sanitary condition of the people, more especially the admission of abundant air and sunlight to their dwellings. They are impressed with the very definite evidence of the advantage which has arisen from the demolition of insanitary and unwholesome dwellings and from opening up the densely populated quarters of the city. They consider that the results of the work of the corporation in this direction clearly indicate the wisdom of advancing still further on the same lines with as little delay as circumstances will allow. The committee are decidedly of opinion that the best interests of the labouring classes will be served if they are re-housed in conveniently accessible outskirts open to air and sunlight rather than in central parts of the city in the midst of warehouses and other buildings associated with increasing commerce. The committee consider that the fact should be made widely known that persons of intemperate habits succumb rapidly to tuberculous disease. The records of hospitals and workhouses furnish abundant evidence that this fatality is a direct outcome of the associations inseparable from the constant abuse of alcohol. As regards the risk of healthy persons becoming infected from consumptive patients with whom they are living, the committee trust that this will be greatly diminished by the diffusion of information as to the proper means of dealing with the sputum and by attention to the hygiene of the dwellings of the people. In those cases, however, in which the necessary precautions cannot be properly carried out it is eminently desirable that the consent of the patient and his friends should be obtained to his removal to some suitable institution where the danger of his becoming a source of infection to others would be obviated.

3. *The provision of sanatoria and special hospital accommodation.*—As regards the important question of treating those who are the subject of tuberculosis the committee are strongly of opinion that special provision is needed for them on an adequate scale. They cordially approve the suggestion that boards of guardians should establish sanatoria in some rural localities, chosen with a view to their fitness for the treatment of such cases, and that all cases of consumption which are likely to be cured or materially benefited should receive treatment therein. For those cases which offer no reasonable hope of recovery they recommend that special wards in the present union hospitals should be set apart. The problem of providing for sufferers from tuberculosis who are above the pauper class but are unable to bear the expense of the prolonged rest and change which are so essential for the treatment of consumption the committee consider has been greatly simplified by the generous donations made by Lady Willox and Mr. W. P. Hartley to the committee of the Hospital for Consumption and Diseases of the Chest for the purpose of erecting a sanatorium at West Kirby. They desire to record their high appreciation of the value of this munificent gift to the community and they trust that the sanatorium when established will receive liberal support. They are also of opinion that it is not desirable that any extensive provision should be made for the treatment of consumption in the city.

4. *Voluntary notification of infected houses and disinfection of the same by the health authorities.*—The committee have carefully considered the question of scheduling tuberculosis as a notifiable disease. They are of opinion that at present public opinion is not ripe for such a measure. They propose, however, that medical practitioners should be invited to inform the medical officer of health of cases of tuberculosis in which disinfection or other precautionary measures will, in their opinion, be attended with benefit. The medical officer of health has informed the committee that he is prepared in all cases in which the necessary consent can be obtained to carry out disinfection of the dwellings, clothing, and other effects.

Dr. T. R. BRADSHAW proposed, and Dr. HOPE seconded, the adoption of the report.—After discussion in which the PRESIDENT, Dr. GILL, Dr. IMLACH, Dr. PERMEWAN, Dr. GLYNN, Dr. E. T. DAVIES, Dr. BUSHBY, and Mr. RUSHTON PARKER took part the report was adopted.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

The Spread of Typhoid Fever.—Ligature of the Common Carotid Artery in Hæmorrhage from the Ear.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Feb. 3rd, the President, Mr EDWIN LEE, being in the chair.

Dr. SPOTTISWOODE CAMERON, in a paper on the Spread of Typhoid Fever, took it for granted that everyone acknowledged the necessity of a specific bacterium as the cause of the disease. Sudden outbursts of typhoid fever like that at Maidstone were generally associated with the water-supply but was it not possible that in some cases a more diluted poison selecting the more susceptible individual might be responsible for some of the increased autumnal prevalences of the disease? It has been noticed in milk outbreaks that members of a family taking only a few teaspoonfuls of milk to discolour their tea escaped infection whilst those taking larger quantities raw succumbed. Might not similarly the amount taken along with the susceptibility of the individual be the determining factors of the attack in cases of slightly polluted water? Water obtained by impounding natural streams was more or less polluted. Even our uplands are not primitive deserts. Nestling in sheltered ravines upon their slopes are shepherds' and herdsmen's houses, farmsteads, pastoral and even to a slight extent agricultural. Their pastoral and bucolic inmates are not greatly concerned to protect the water-supply of the distant town. The manure heap, privy, and slope stone are there and the fall is towards the runnel making for the reservoir. The outbreak in the Tees Valley, the increased typhoid fever notifications in London following the passage of flood water over the Thames companies' filter-beds are suspicious circumstances. As to milk the insistence upon a pure and properly guarded water-supply to every milk farm would make such outbreaks rare. It was impossible altogether to ignore the possibilities of aerial convection. In a case which Dr. Cameron had recently published in the *Surveyor* he had shown how in a public institution the only common food of those attacked was milk, that the sources of the milk-supply were pure, and that the infection of the milk must have occurred in the keeping cellar which communicated with the drain. The milk could only have been infected by the passage of the poison through the

air. The cases were many in which the person attending a patient was the only other member of a family to be attacked by the disease. In others neighbours using common conveniences, especially middens, contracted typhoid fever. While in well-ventilated rooms with immediate and complete disinfection of the excreta the risk of infection was small, it was otherwise in a small cottage where an exhausted mother waited upon a child and where soiled linen was stored close to the food-supplies. Delépine had isolated the typhoid bacillus from soil taken from below a "disinfected" midden and Sidney Martin, 50 days after inoculation, had been able to cultivate the bacillus from non-sterilised humus kept meanwhile in an outer shed at a temperature varying from 3° to 16° C. Finally, Dr. Cameron advocated (1) the thorough inspection of the sources of water-supplies, and he thought it advisable that water authorities should themselves own their gathering grounds; (2) the protection from contamination of the soil around dwellings and upon which new houses were to be built; (3) the cremation of the typhoid bacillus as it leaves the person of the patient; and, to secure this, (4) early notification by the practitioner even of doubtful cases. He feared much that what was called disinfection consisted in destroying the competitive bacilli and leaving Eberth's in full possession of the field.—Dr. EVANS (Bradford) pointed out that the term "aerial convection" as used by Dr. Cameron in reference to the spread of typhoid fever was quite as reasonable as when applied to the diffusion of small-pox. The poisons of the two diseases are recognised as being microbic and they could therefore be conveyed in the same manner. Nevertheless it must be admitted that the distance through which the germs of typhoid fever may spread would be much less than the distance covered by the particulate infection of small-pox.—Dr. BARRS and Mr. A. E. A. PEARSON both thought that if nurses contracted typhoid fever it was due to an imperfect disinfection of the hands.—Surgeon-Major ROBINSON, Dr. CHEETHAM, Dr. JOHNSTONE, Dr. CHURTON, Dr. GRIFFITH, and the PRESIDENT also joined in the discussion.

Mr. WHITEHEAD read a paper upon the Ocular Phenomena associated with Cheyne-Stokes Breathing.

Dr. STEWART related a case of Hæmorrhage from the Ear necessitating Ligature of the Common Carotid, and said that on May 18th, 1898, he was called to a child suffering from hæmorrhage from the ear. On arrival he found a girl, aged three years, lying on a sofa almost lifeless. Three weeks before she had got thoroughly wet and a few days afterwards a lump appeared at the angle of the left jaw with pain on swallowing. On the fourteenth day from the appearance of the swelling in the neck the child complained of intense earache; a few hours afterwards there was a profuse discharge of foul greenish pus from the left meatus, and 48 hours afterwards there was an attack of hæmorrhage from the ear, followed by another on the same day and two more on the day following. The bleeding always ended in faintness. Dr. Stewart saw the child on the third day from the commencement of the hæmorrhage, when she had another attack. He packed the external meatus with gauze and bandaged the head up tightly, but as the bleeding recurred during the night the mother consented to an operation. The left common carotid was ligatured. The child was quite well within a week's time. The blood was distinctly venous in character. The only change which was noticeable after the operation, and which still persists, was a flushing of the right side of the face with profuse sweating on exertion, as compared with pallor of the left side, on which the carotid artery was tied.—Dr. TEMPEST ANDERSON, Mr. BROWN, Dr. GRIFFITH, and Mr. WHITEHEAD took part in the discussion.

The following cases and specimens were exhibited:—

Dr. JENKINS: A case of Raynaud's Disease.

Mr. SIMS: Fœtal Monstrosity.

Dr. BRAITHWAITE: (1) a Dermoid Cyst; (2) an Ovarian Cyst containing Warts; and (3) a Small Ovarian Cyst.

Mr. WARD: (1) Total Excision of the Lower Jaw (patient and specimen); (2) Skiagraphs of (*a*) Luxatio Erecta of the Shoulder, (*b*) Simple Dislocation of the Ankle without Fracture, and (*c*) both Wrists, one in the Early Stage of Tuberculous Disease; (3) a case of Abscess of the Tibia treated with Dr. Robinson's Decalcified Bone-Dressing; (4) a case of Tenoplasty.

Dr. GRIFFITH: (1) A case of Post-diphtheritic Palsy in a Man, aged 58 years; (2) Specimens from the Post-mortem Room.

Dr. CROFT: (1) Double Hydrosalpinx; (2) Fibrous and Cystic Tumour of the Ovary; (3) Sarcoma of the Uterus (microscopic specimen).

Mr. THOMPSON: Specimen of Gangrenous Appendicitis.

Dr. BARRS: (1) Tuberculous Lesions of the Hands, Ears, and Glands; (2) Œsophageal Obstruction, with Paralysis of the Left Vocal Cord; and (3) Thoracic Aneurysm.

Mr. LITTLEWOOD: (1) Gangrene of the Hand following Simple Fracture of the Forearm due to Rupture of the Ulnar and Anterior Interosseus Arteries; and (2) Ruptured Tubal Gestation.

Dr. SHARP: Specimens of Paraguay Tea.

Mr. LAWFORD KNAGGS: A case of Bony Ankylosis of the Jaw.

Dr. HELLIER: Tuberculous Peritonitis treated by Abdominal Section. (The patient was shown.)

Dr. TREVELYAN: (1) A case showing Coarse Fibrillary Contractions in the Calf Muscles; (2) a case of Affection of Speech; and (3) a case of Locomotor Ataxy in a Machinist.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—The Present Position of the Pessary in Gynæcological Practice.—Vaginal Hysterectomy for Cancer of the Uterus.

A MEETING of this society was held on Feb. 8th, Dr. J. HALLIDAY CROOM, President, being in the chair.

The PRESIDENT showed a Simple Ovarian Tumour from a patient who after its removal developed acute mania and died two days afterwards from exhaustion. This sequela of ovariotomy he believed to be unique. The mental family history was not good. Post mortem no trace of abdominal disease was found.

Dr. J. W. BALLANTYNE read a paper on the Present Position of the Pessary in Gynæcological Practice. In order to gauge the trend of professional opinion on this subject he had examined the opinions expressed in recent medical literature and also the experience of instrument makers supplying the profession. From the latter source he found that there had been during the last 20 years a steady increase in the number of pessaries sold to the profession; and along with this a steady decrease in the number of varieties asked for, so that now the ring and the Hodge pessaries in one form or other and occasionally the vaginal stem with an abdominal belt constituted practically the only ones in common use. Medical men showed a marked tendency, after trying various forms of the Hodge pessary, to return to the Albert Smith modification in vulcanite, and after testing different kinds of rings to revert to the use of the simple rubber instrument containing a watch spring. More marked than the increase in the use of pessaries had been the growth in the demand for uterine curettes, especially of Martin's. The sale of these in the last six years had been remarkable and there had been a striking decrease in the popularity of caustic holders and instruments of that type. Intra-uterine stems were hardly ever asked for. Dr. Ballantyne then analysed the opinions expressed in 20 text-books on gynæcology published in the last 10 years. Of these eight authors were strongly in favour of this method of treating uterine displacements, five were strongly against it, and seven were critical, and even sceptical, without actually going so far as to condemn the method and banish the instruments. Different objections had been raised to the use of pessaries, and there was the inconvenience, as they required attention by frequent douching and occasional visits to the physician and might interfere with marital relations. Some considered even properly adjusted pessaries to be inefficient and doubted if they were ever the cause of relief from symptoms; most had no doubt at all that they never really cured in the sense of complete restoration of the normal position of the parts. Some averred that they were not only ineffective but also injurious and even dangerous; some considered all pessaries as dangerous; others only condemned the intra-uterine stem, the Zwanck and the large ball pessary. They were also credited with being the cause of pruritus, vaginitis, ulceration, fistulæ, prevention of union of a torn cervix, subinvolution, cancer, and septic inflammation of the uterus and tubes. The supporters of their use claimed that any inconvenience or attention necessitated by the pessary was not to be compared with the trouble and expense attending an operation. Besides, they were undoubtedly effective in relieving symptoms and sometimes even produced a permanent cure in a

longer or shorter time. Most admitted that the ordinary vaginal pessaries with ordinary care were perfectly safe; and some stated that with special care intra-uterine stems might also be considered innocuous. Opinions varied with regard to the suitability of pessaries to the different conditions. In incomplete prolapse of the uterus when the perineum could be depended on many recommended the indiarubber ring or Hodge-Smith pessary with or without transverse bars according as there was or was not some degree of cystocele. The results were that symptoms were relieved, it kept the replaced uterus in position and it gave time for the normal uterine supports to regain their tone, and if a pregnancy should occur or the climacteric be near this benefit might become permanent and a real cure effected. Most writers, however, believed that the benefit was only palliative and the relief temporary. The alternative treatment recommended in these cases without the use of pessaries was rest, douching, ichthyol, glycerine tampons, anterior colporrhaphy, perineorrhaphy, ventro-fixation of the uterus, or Alexander's operation. In complete prolapse where the support of the pelvic floor was lost the only possible pessary was the stem, with an abdominal belt, outside straps, and a perineal pad. The Zwanck and all instruments with hinges and screws were now generally regarded as both unsatisfactory and dangerous. For anteversions most authorities were now agreed that to try to treat anteversion of the uterus by pessaries was to use means which were inadequate to remedy a condition which was not itself productive of trouble. Anteflexion was accompanied by well-marked symptoms and the use of pessaries for its relief was narrowed down to the justifiability of employing an intra-uterine stem. All recognised the risks of sepsis, inflammation and perforation of the uterus. The most suitable seemed that recently introduced by Lefour which was entirely uterine without any vaginal portion. The galvanic stem was also used. In retrorsions of the uterus most writers agreed that their correction by a pessary was followed by an amelioration or a total disappearance of the symptoms, also that they scarcely ever effected a permanent cure, the symptoms returning on withdrawing the instrument. The ring and Hodge-Smith pessaries were generally used for these conditions, the latter being carefully fitted to the size, shape, and curvature of the vagina.—Professor SIMPSON, Dr. HAULTAIN, Dr. CHURCH, Dr. LACKIE, and others engaged in the discussion.

The PRESIDENT read a paper on Vaginal Hysterectomy for Cancer of the Uterus. He said that the immediate risks of the operation when undertaken in circumstances at all favourable were small. Those cases which succumbed shortly after operation could only be badly selected ones, where the fornices were small, where the disease had involved the posterior wall of the bladder (a condition always difficult of diagnosis beforehand), or where sepsis had resulted; but in well-selected cases this event was seldom to be expected. A case not only to be immediately but also remotely successful must necessarily be attacked in its most early stage. A very early carcinoma of the cervix, still more an early tubular carcinoma of the body of the uterus, would, under ordinary circumstances, give an expectation of life for the patient of from 18 months to three years. With sarcoma the expectation was distinctly longer. Out of over 200 cases of cancer he had only found 14 which were suitable cases for operation and when the operation should have given every prospect of success. The cancer was strictly limited and in the early stage and they should have done well. Yet in all the disease returned and he believed that the women's lives had been shortened and that certainly the death was more painful than in those cases which were not operated upon. A woman's expectation of life with uterine cancer was from two to five years; the result of his experience was that with recurrence of the cancer after operation the life was shortened. His experience in vaginal hysterectomy for cancer had been an unfortunate one.—Dr. N. T. BREWIS, Dr. HAULTAIN, Dr. BALLANTYNE, and others took part in the discussion.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The fourth meeting of the forty-second session of this society was held at the Royal Kent Dispensary, Greenwich-road, S.E., on Feb. 3rd, Dr. Morgan Dockrell, President, being in the chair. Five new members having been elected and several members admitted, Dr. Dundas Grant read a paper on cases of Chronic Suppuration of the Frontal Sinus and Antrum of Highmore treated exclusively through the Nose with good result. After a few preliminary remarks as to the recognition of latent empyema of one or more of the sinuses of the nose when evidenced by free purulent discharge, often unilateral and usually accompanied by a fetor of which the patient was conscious, Dr. Dundas Grant proceeded to describe the various methods of treatment. The most generally recognised and practised was a puncture made through the alveolus of an extracted tooth extending into the antrum, through which fluids could be introduced by means of a syringe with a suitably adapted tip. For convenience of use by the patients this method was certainly superior to all others. It was originally supposed that empyema of the antrum invariably arose from disease of the teeth in this neighbourhood. This, however, was not always the case, and Dr. Grant narrated an instance of a patient with empyema of the antrum of several months' duration whose teeth were absolutely perfect. He washed out the antrum on two occasions with Lichtwitz's cannula and trocar, introduced through the inferior meatus of the nose, and was surprised to find that the patient recovered so completely that no further treatment was required. In view of such a case he was convinced that empyema of the antrum could arise from other causes than disease of teeth and that the alveolar puncture was not always called for as a method of treatment. In another case in which the alveolar puncture had been made and a tube had been introduced very little improvement took place and the suppuration persisted. The tube was then extracted and the alveolar opening was allowed to close, the antrum was washed out by means of Lichtwitz's trocar and cannula from time to time, and a complete rapid recovery ensued. This led Dr. Grant to the conclusion that the alveolar puncture was not always satisfactory, and that in point of fact it was sometimes injurious. Other cases supported this view. He considered that the presence of a communication between the mouth and the antrum was apt to lead to repeated infection of the antrum through the mouth. He brought before the meeting a patient in whom the alveolar irrigation had to be given up on account of the irritation which it produced and the absence of diminution of discharge. The treatment was carried out by means of Krause's coarse antral trocar introduced through the inferior meatus of the nose, the anterior extremity of the inferior turbinated body having been removed so as to render the introduction easy. Complete recovery resulted. The conclusion was that in the absence of obvious dental causes treatment should be carried out through the nose and that it was quite unjustifiable to extract a sound tooth so as to make an alveolar puncture for diagnostic purposes. On the other hand, if the cause was obviously dental or there was a gap in the line of teeth the alveolar puncture was by far the most convenient and desirable method of treatment. In regard to the frontal sinus he believed that the dependent position of the orifice was favourable to spontaneous recovery. The middle meatus of the nose ought to be freed by the removal of polypoid growths and it was often desirable to remove the anterior extremity of the middle turbinated body. In several instances he had brought about a complete cure by these procedures followed by the introduction of mentholised vaseline oil into the cavity by means of a suitable curved cannula. This introduction was possible in probably about 50 per cent. of cases. Naturally no such method of treatment was efficient in old-standing cases in which the frontal sinus was filled with polypoid or granulation tissue. Then the external operation was necessary, but in view of the uncertainty as to the condition of the interior of the cavity Dr. Grant insisted that a fair trial should be given to the intra-nasal methods before resort was made to this more serious proceeding.—The paper was discussed by the President, Dr. Scholefield, Mr. J. P. Purvis, Dr. Toogood, Dr. Lorimer Hart, Mr. Ernest Clarke, Mr. H. W. Roberts, and Dr. H. A. Munro.—Dr. Grant replied and the meeting then adjourned.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Feb. 10th, Dr. E. Gwynn, President, being in the chair.—Dr. F. J. Allan read a paper on Diphtheria especially in regard to the Duration of Infection and the Use of Antitoxin as a Prophylactic. In the absence or the neglect of facilities for the bacteriological examination of the throats of convalescents many cases were, he believed, allowed to mix with the healthy at much too

early a stage. Fortunately the bacillus in the majority of cases lost its virulence in a week or two after the disappearance of the membrane, but it might persist in a more or less virulent state for many weeks or even months. The question then arose whether these bacilli could under favourable conditions regain their virulence, rendering such persons again infective. The New York Board of Health believed such recovery of their virulence to occur very rarely if ever, but Sir Richard Thorne and Dr. Hubert Airy maintained the "progressive development of infectivity," and Dr. D. Astley Gresswell had called attention to the "recrudescence" of diphtheria, a remarkable case having recently been reported by Golay of three recurrences of the disease in the same individual within a year, the bacilli being in the intervals non-virulent. The prophylactic use of antitoxin had not as yet made much way in this country, but in Germany and in America it was carried out extensively and with the greatest success. The position had been well expressed by Dr. Sims Woodhead: "It had been proved to the hilt that whichever agent (toxin or antitoxin) first gained access to the tissues it held the field except against the attacks of enormously greater quantities of the other. If the toxin got in first and were left unmolested for some time it could with difficulty be neutralised even by large quantities of the antitoxin, whereas small quantities of antitoxin already circulating in the fluids of the body rendered innocuous the attacks of comparatively large doses of the toxin." After narrating with much detail an instructive experience of his own in connexion with a recurring outbreak of diphtheria in a school he described the course of procedure for the diagnosis, bacteriological inspection, and elimination of the disease, remarking that with the highly concentrated sera now in the market the prophylactic dose of from 100 to 300 units was very small in volume. —Dr. Symons said that in Bath whenever a case was notified he offered to immunise the family with the consent of the medical attendant. Antitoxin treatment was most successfully carried out in their hospital.—Dr. Goodall said that he isolated adults for four weeks and children for six after the disappearance of membrane and that he immunised doubtful cases. — Dr. Bulloch said that he had been working at the bacteriology of diphtheria for seven years and was more impressed now than ever with the difficulties attending the diagnosis. The reaction was useless; Neissler's was the most trustworthy of all tests, but virulence could be determined only by experiments on the guinea-pig. Three or four days were required for an absolute diagnosis. Pseudo-bacilli were of many kinds and some had been cultivated up to virulence by Hewlett and Salter. He had himself found virulent bacilli in the throat six months after complete convalescence and in that of an assistant who had never suffered from the disease. Abel, too, obtained them from a toy with which a diphtheritic child had played six months before. The duration of immunity depended on the dose of antitoxin, but never much exceeded three weeks, and susceptibility was greatly a question of age. Antitoxin had no influence on the bacilli, which could be destroyed only by washing the throat with effective bactericides. Diphtheria was rarely if ever spread by means of air or water and not often by milk; the usual mode of diffusion was association of susceptible persons with others who carried in their throats bacilli which might or might not be virulent to themselves.—Dr. W. A. Bond, Dr. Christopher Childs, Dr. Willoughby, and others having spoken Dr. Allan replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 1st, Mr. T. D. Pryce, President, being in the chair.—Dr. Handford read notes of three cases which had been under his care. The first was that of a girl who had been under observation for three and a half years with symptoms of Intracranial Growth. The illness commenced about eight months before admission when she woke up one morning with partial left-sided hemiplegia. Later a lump appeared in the right frontal and parietal regions which was excessively tender. She was trephined and the disease proved to be an inflammatory thickening of the bone which had pressed on the brain. The skull was more than one inch thick in the area named.—Mr A. R. Anderson who performed the operation spoke on the case, contrasting the use of the trephine and forceps with that of the mallet and chisel. He considered that the shock of operation was much less with the former than with the latter.—Mr. Willis said that he had had the privilege of seeing the case before operation through the kindness of Mr. Anderson and he expressed at that time the opinion that the disease was one of inflammation in the bone, arriving at this conclusion from the excessive tenderness of the bone which amounted to agony when gently tapped with the finger. The operation produced marked improvement in the symptoms and general condition of the patient who was shown.—Dr. Handford's second case was one of some obscurity but was thought to be Actinomycosis of the Transverse Mesocolon. The patient was a man who was admitted to hospital in August, 1898, with abdominal pain and diarrhœa. During his stay in the hospital he wasted rapidly, losing four stones in weight in six or eight weeks; he also had repeated rigors and jaundice on one occasion which lasted 24 hours only. An exploratory cœliotomy was performed and a large mass was discovered about the head of the pancreas, the intestines being matted together. Nothing could be done and the wound was closed. He died and the necropsy revealed a large dense mass of fibrous tissue in the transverse mesocolon, with numerous scattered abscesses. Ulceration had taken place from without into the stomach. The ray fungus was not able to be demonstrated beyond doubt in any of the pus.—Mr. A. R. Anderson spoke on this case, he having operated, remarking that he had no doubt that the disease was actinomycosis. He had operated on about 12 cases of this disease now and had been present at necropsies on several other cases, and his experience warranted his opinion of the nature of the disease, even in the absence of any discoverable ray fungus.—Dr. Handford's third case was that of a lad who had been treated for five weeks at the General Hospital for Chronic Gastric Ulcer of which disease he had the classical symptoms. He much improved and was sent to the convalescent home. Shortly afterwards he was re-admitted with abdominal pain, distension, vomiting, and a febrile temperature. Tuberculous peritonitis was diagnosed and Mr. A. R. Anderson performed cœliotomy, the diagnosis being verified. The patient soon afterwards died. Dr. Handford suggested that he had become infected with tuberculous milk during his stay in the convalescent home, his diet having consisted of milk at that time, and that he had the more readily become a victim to the disease on account of his old long-standing gastric trouble.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—A meeting of this society was held at St. Bartholomew's Hospital on Feb. 10th, Professor Alexander Macalister, F.R.S., President, being in the chair.—Mr. C. B. Lockwood gave a lantern demonstration of a Suprarenal Structure found in the Inguinal Canal and showed several specimens with such bodies attached to the spermatic cord which had been mistaken for hernia. The explanation of the position in which those structures occurred was to be found in the close relationship between the suprarenal and Wolffian bodies in an early stage of the human embryo.—Mr. Cecil H. Leaf exhibited specimens and drawings of the Liver, hardened *in situ*, showing the so-called Riedel's lobe. Mr. Leaf held that it was not a lobe in any strict sense of the word, but merely a localised prolongation downwards of the anterior margin of the liver in the neighbourhood of the tenth costal cartilage. It occurred much more frequently in women than in men and in all degrees of development. It might be very slight—a common condition—or long and linguiform, reaching several inches below the costal margin, and in such forms simulating floating kidney. It did not appear to occur in children and was probably caused by pressure.—Professor F. G. Parsons and Dr. G. F. Rogers showed specimens of Abnormal Lobulation of the Liver. The lobulation did not answer to any division known to comparative anatomists.—Mr. H. J. Waring showed a specimen in which the Cystic Duct which was much dilated joined the Common Hepatic Duct in the neighbourhood of the Duodenum so that the common bile-duct was extremely short.—Mr. R. H. Burne drew attention to the extremely anomalous arrangement of the bile-ducts in the common otter. The cystic and hepatic ducts formed an elaborate network, recalling the arrangement found in certain reptiles.—Dr. A. Keith brought forward Evidence to show that the Forms of Liver found in Man and the Higher Primates was adaptative to the Upright Posture.—Professor Arthur Thomson laid before the meeting Specimens and Drawing showing several minor fissures on the Under Surface of the Right Lobe of the Human Liver which were constant in occurrence

and had been regarded as pathological. These fissures were represented in the liver of the gorilla by deep continuous fissures and were also much more marked in the human fœtus.—Dr. G. F. Rogers showed a specimen in which the Musculo-cutaneous Nerve was absent and also the Pedal Part of the Anterior Tibial, their places being supplied by branches from the saphenous nerves.—Dr. E. Barclay Smith showed a specimen of Divided Parietal Bone and reviewed the literature of this rare abnormality.

PATHOLOGICAL SOCIETY OF MANCHESTER. — A meeting of this society was held on Feb. 8th, Dr. R. B. Wild, President, being in the chair.—Dr. Trevelyan (Leeds) read a paper on the Diphtheria Bacillus, based on the examination of suspected exudation in the laboratory of the Leeds Medical School. He thought that the aggregation of the protoplasm in certain parts of the microbe was more characteristic than any arrangement of the micro-organisms in regard to each other. The short bacillus had been comparatively rarely found in these examinations but mixed forms were often present. Occasionally anomalous forms in the shape of long and short clubs had been obtained, but this no doubt depended largely on the nutrient medium used. Branching forms had not been seen, cultivation on white of egg usually yielding the long form. Neisser's method of staining required manipulation and perhaps the help to be obtained from it in doubtful specimens, especially of the short bacillus, is hardly as great as was at first expected. The serum media are of such value in the cultivation because the diphtheria bacillus outgrows other microbes, at least within the first 24 hours, but the cultivation can be continued on other media equally well. The growth obtained on antitoxic serum was sparse. Grown on alkaline litmus lactose agar, typical forms did not always produce acid. This acid production, especially in glucose media, could not be of great value in the rapid diagnosis. The characters of the diphtheria colony were then discussed and illustrated by drawings and impression and other specimens. The colony is frequently thicker in the centre but sometimes also round its margin. The slightly irregular margin and its somewhat dry aspect and loose attachment to the medium are important characteristics, but it is not always possible to recognise it with certainty. Finally, Dr. Trevelyan expressed the opinion that the bacteriological examination is of great importance to the clinician in not an inconsiderable number of cases, yet if the full value is to be obtained the results must be promptly communicated, thus in the large majority of cases it is possible to report by telephone or other means within 24 hours of receiving the specimens.—Professor Jones and Dr. Kelynack showed preparations of a Sarcoma of the Left Kidney which had been successfully removed by lumbar nephrectomy from a man, aged 50 years. The chief symptoms had been hæmaturia and pain. The growth consisted of a very vascular myxo-sarcoma involving almost the whole of one end of the organ.—Mr. Wright and Mr. Coates described an unusual case of Diverticulum of the Bladder not due to obstruction.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—A meeting of this society was held on Jan. 27th, the President, Dr. J. Middlemass Hunt, being in the chair.—Mr. Lennox Browne showed a case of Laryngeal Epithelioma of at least two and a half years' duration which had not been submitted to operation. The patient was a man, aged 63 years. His principal symptom was loss of voice which had occurred suddenly about four and a half years ago and had persisted. On laryngoscopic examination the left vocal cord could not be seen, but the whole of the tissues on the left side were immoveable and presented the appearance of a large, irregular mass with heightened colour and warty surface. The right cord was involved but it moved freely. The laryngeal outskirts were much infiltrated. No glands could be detected externally, but a slight spreading outward of the left thyroid ring could be felt. There was no evidence of syphilis.—Dr. Macintyre (Glasgow) and the President were inclined to doubt the diagnosis.—Mr. Bark (Liverpool) read notes of a case of Cyst of the Laryngeal Ventricle.—Mr. Stoker read a paper on the Curative Treatment of Laryngeal Phthisis. Starting with the belief that laryngeal phthisis was due to the presence of micro-organisms or the toxins they produced he suggested that a culture should be taken from the affected part, an oxidised toxin made and applied frequently. He preferred the term "oxidised toxin" to "antitoxin," as he contended that the most potent factor in bringing about such a change was the process of oxidation. He described in detail his method of preparing the oxidised toxin.—Dr. Barclay Baron (Bristol) opened a discussion on the Value of General Treatment in Diseases of the Throat, Nose, and Ear. He reviewed the treatment of tuberculosis and more especially phthisis laryngea during the last few years and contrasted the striking difference in the general treatment adopted 25 years ago and that carried on at the present day. With regard to syphilis, he thought that larger medicinal doses should be given in the tertiary stages than appeared to be given in England. In the treatment of diphtheria he paid a tribute to the value of antitoxin. He thought the profession at large did not thoroughly realise that many cases of acute tonsillitis were rheumatic and yielded markedly to the salicylates.—The discussion was continued by Mr. Wyatt Wingrave, Dr. R. H. Woods (Dublin), the President, and others.

WEST PENWITH MEDICAL SOCIETY.—A meeting of this society was held at Penzance on Feb. 8th, Dr. J. B. Montgomery, the President, being in the chair.—It was decided to support the objects of a resolution passed by the Liverpool Medical Institution relative to the Vaccination Act (1898), of which a copy had been sent with a letter.—Mr. W. S. Bennett introduced a discussion on the Treatment of Abortion. In his opinion the treatment ought to be rapid dilatation of the os with the finger and removal of the uterine contents as far as possible without instruments.—Mr. A. T. Jago, Mr. C. S. Jago, Mr. Symons, and Mr. Palemon Best took part in the discussion.—Mr. John Symons described a case of Rupture of the Duodenum following a Blow on an Empty Stomach. There was no external bruising and no vomiting, but the patient's temperature rose to 104°F. Post mortem it was found that there were universal peritonitis with much adhesion of the intestinal coils and some partially digested food behind the liver.—Mr. Symons also described a series of cases of Fracture of the Skull.—Dr. Hugh M. Montgomerie related a case of Complete Recovery from Severe Chronic Dysentery in which rest, milk diet, and salicylate of bismuth were the principal treatment. He also showed a Gall-stone removed from the sister of the patient who suffered from dysentery and described a case of Choroido-Retinitis occurring in a man who had two brothers also partially blind and another one with lateral sclerosis of the spinal cord.—The honorary secretary, Mr. Evershed, resigned his office owing to departure from the town and Mr. R. D. Boase was elected temporarily in his stead.

SOUTH-WEST LONDON MEDICAL SOCIETY. — A meeting of this society was held at Lavender-hill, S.W., on Feb. 8th, Dr. Duke being in the chair.—Dr. Arkle read a paper on Some Points in the Treatment of Tuberculosis. He said that specific there was none, but probably of all remedies the "open-air" method of treatment was the most popular and the most successful. He now felt more certain than he did some years ago that the method can be worked well in the British Isles. The preparation and "hardening" of the patient was a *sine quâ non*, for tuberculous patients were generally "hot-house plants" and required to be taught to be more Spartan in their mode of life. Then they could live in the open air, for their bedroom windows would be widely open at night, and they would spend their days out of doors. Attention was called to this preparation as carried out at Falkenstein and other Continental sanatoria, especially the method of daily sponging the body, at first with pure spirit, then diluted more and more till cold water only was used. Various methods of relieving symptoms and of improving the nutrition were mentioned. In conclusion Dr. Arkle urged that the early and oft-repeated examination of the sputa was a most important element in treatment as it was in diagnosis, for the disease was generally considerably in advance of the ordinary physical signs.—A discussion followed in which Dr. Duke, Dr. Mackintosh, Mr. Ryan, Major Mark Robinson, I.M.S., Dr. Barkwell, Mr. Gay, and Mr. J. B. Howell took part.

PLAISTOW AND CANNING TOWN MEDICAL SOCIETY.—A meeting of this society was held on Feb. 9th at The Hall, Balaam-street, Mr. Buksh being in the chair, to hear an address by Dr. Biernacki on the Systematic Treatment of the Commoner Fevers.—The speaker, dealing with the severe types of these diseases, pointed out that the general morbid condition was induced by poisonous substances circulating in the blood. He then traced the genesis

of these poisons, specific and non-specific, in order to elicit rational methods of retarding their formation. In the latter part of his address these methods were reviewed and stress was laid on the fact that if employed consistently from the outset they had a considerable influence in diminishing the toxic elements in the blood. The neutralisation of the specific poisons by means of antitoxin was also touched upon. Finally, a point was made of the great importance of maintaining excretion. Dr. Biernacki throughout his address deprecated a too great reliance upon treatment by drugs alone, and threw doubt on the efficacy of many drugs commonly used. Those having a prejudicial effect on excretion were condemned, and in this regard the danger of the exhibition of digitalis in heart failure associated with febrile oliguria received special attention. A general discussion followed in which the particulars of several cases were adduced, and the meeting closed with a hearty vote of thanks to Dr. Biernacki.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The fifth meeting of the session of this society was held in the medical library of University College, Bristol, on Feb. 8th, Dr. Roxburgh being in the chair.—Dr. F. H. Edgeworth showed a specimen of Abscess of the Brain.—Dr. J. O. Symes read a paper on the Bacteriology of some Suppurations Complicating Pulmonary Disease.—Dr. Michell Clarke, Dr. Cave, Dr. James Swain, Mr. R Williams, and Dr. Elliott discussed the paper.—Dr. Michell Clarke read a paper on Some Cases of Apoplexy illustrated by lantern slides showing numerous temperature charts.—Mr. T. Carwardine showed microscopic and lantern slides illustrating Paget's Disease.—Mr. R. Williams spoke on the subject.—Mr. W. H. Harsant read notes on a case of Actinomycosis and illustrated his paper with microscopic and lantern slides.—Dr. Waldo made some remarks on the treatment of the disease.—Professor Edward Fawcett showed a large number of lantern slides of sections of the Cord, Medulla, and Mid-brain stained by a modification of the Pal-Weigert method.

Reviews and Notices of Books.

Sanatoria for Consumptives in Various Parts of the World. By F. RUFENACHT WALTERS, M.D., M.R.C.P. Lond., Physician to the North London Hospital for Consumption and Diseases of the Chest. London: Swan Sonnenschein and Co. 1899. Pp. 374. Price 10*s.* 6*d.*

THE publication of this book is certainly opportune, appearing at a time when interest is so actively taken in the nature and treatment of pulmonary tuberculosis. In order to give our readers an idea of the full scope of the work we may quote the title-page in full: "Sanatoria for Consumptives in Various Parts of the World (France, Germany, Norway, Russia, Switzerland, the United States, and the British Possessions): a Critical and Detailed Description, together with an Exposition of the Open-air or Hygienic Treatment of Phthisis, with an Introduction by Sir Richard Douglas Powell, Bart., M.D., F.R.C.P." It is obvious therefore that Dr. Walters set himself a very difficult task and he has accomplished it in a most praiseworthy manner.

In the first chapter the author describes what he means by "Sanatoria for Consumptives." He defines them as "establishments for the open-air treatment of presumably curable cases of consumption under medical direction, mainly by hygienic and educational measures. They are not intended for patients whose prospects of recovery are small, nor are they intended for non-tuberculous cases or for those who are merely out of health." We consider this definition a good and full one. It might be recommended with advantage to the managing boards of the special hospitals for diseases of the chest in this country. Admission to most of these can be obtained by subscribers' letters only, and whilst, indeed, the in-patients are all suffering from some form of chest disease, yet quite half the out-patients have nothing at all the matter with the respiratory organs and yet use the "letters," which might with much more advantage be given to patients who are the subjects of consumption or of some other chest trouble.

Climates suitable for consumptives are next described and Dr. Ransome's words are naturally quoted: "There are many places in this country where on a dry soil and in a sunny sheltered part on the southern slope of some upland most of the conditions can be obtained which are now dearly bought and far sought and often not obtained in distant parts of the world." No doubt these words are to a great extent true although we doubt whether in the civilised world there is a much more unsuitable climate than England as a whole, and certainly Dr. Walters's dictum that the locality for the sanatorium must have "a pure air, free from dust and smoke and the impurities which are inseparable from a dense population," would at once exclude the "hygienic treatment" being attempted in the strictest sense in a large town. Several chapters are devoted to the description of the requirements of a sanatorium, the most suitable site (stress being laid on the fact that the coast is by no means always the best), the extent and nature of the sanatorium grounds, the construction, decoration, and furniture of the buildings, the cleansing and disinfection of the linen and rooms, the reception and disinfection of the sputa, the disposal of the sewage, and the water-supply. Next we find described the atmospheric conditions required for the fresh-air treatment, such as natural and artificial shelter, protection against hot sun, and against wind, rain, and dust. Directions are also given as to the regulation of rest and exercise, and a full description of the diet used in modern sanatoria follows. Chapters then follow in which will be found a discussion on sanatoria for the poorer classes and the way in which they should be conducted. Dr. Walters enters into considerable detail as regards the size, staff, and management, and also answers some of the objections which have been raised against such institutions, referring chiefly to the danger of infection. He barely touches, however, upon another greater difficulty—namely, as to how far it is advisable to increase the number of charitable institutions already in existence, the funds for the maintenance of which can only be secured with the greatest difficulty.

The main part of the book is devoted to a description of the sanatoria in all parts of the world already existing or in course of construction. The author has evidently spared no pains in collecting the information and a most valuable guide to such institutions is the result, probably the best that has hitherto been written. The work is consequently a valuable one to all practitioners, as by referring to it details will be found of all such sanatoria wheresoever situated. In addition to the written description numerous illustrations and plans of the various resorts are given. The means of approach are also given so that the medical adviser can give to his patient all the necessary knowledge before the latter leaves England. For this part of the book we have nothing but praise and can confidently recommend it to our readers. In the last chapters of the book an appeal is made for the construction of sanatoria for the less wealthy middle-class consumptives and it is shown by statistics how far Germany is beyond us in this respect. If the institutions could be made self-supporting we should certainly have nothing to say against them. We fully sympathise with the difficulties which such patients experience in securing the necessary medical treatment. The very rich and the very poor can obtain what is required, but the class of persons to whom Dr. Walters refers are often placed in a most unfortunate position.

Sir Richard Douglas Powell in the preface lays stress on the part which the doctor should play in the management of cases of consumption in his private practice. "The family medical adviser and the health resort physician need, perhaps, more closely to supervise and

regulate the conditions of life as regards exercise, rest, and diet, which as a part of the general treatment of the case are as important as the administration of remedies for particular symptoms. ..... Medical officers of health in this country have yet to acquire authority to do much more to regulate the sanitation of their districts with regard to consumption; and it is, I believe, through this means, in conjunction with better instructed advice given more uniformly by family medical practitioners to their clients, that the public will best learn the sanitary requirements necessary for that further diminution of the prevalence and mortality of the disease which medical science has already done so much to lessen." These remarks we cordially endorse.

Twentieth Century Practice, an International Encyclopædia of Modern Medical Science. Edited by THOMAS L. STEDMAN, M.D. New York. In 20 volumes. Vol. XII.: Mental Diseases, Children, and Old Age. London: Sampson Low, Marston, and Co. 1897. Pp. iv.-849.

THE volume commences with Mental Diseases (p. 254) by Dr. G. Fielding Blandford. The keynote is struck in the words, "we must keep ever before us the fact that disorder of the mind means disorder of the brain and that the latter is an organ liable to disease and disturbance like other organs of the body, to be investigated by the same methods and subject to the same laws"—an excellent enough principle if steadily kept in view and consistently carried out in practice. The author's long experience in lunacy and his position as Lecturer in Psychological Medicine at St. George's Hospital give sufficient guarantee of fair performance in the task of writing the chapters on the Basis, Clinical Forms, Pathology and Medico-Legal Aspects and Treatment of Lunacy, though the necessary restrictions of space operate in a measure disadvantageously to a really adequate performance of the work. Stating that insanity is a wide and comprehensive term and mainly one of convenience, he advises the use rather of the term "the insanities" in speaking of the large and varied hosts of mental diseases, in conformity with what is doubtless increasing usage. The chapter on Cerebral Anatomy and Histology gives expression to the more recent results obtained, the *résumé* on Cerebral Histology and on the Comparative Evolution of the Brain—from the reptilian to the mammalian and human level—being mainly based on the work of Andriezen. The "insane diathesis" is briefly and well put, and concerning the insanities of puberty the author wisely says, "If we were to collect all the cases of insanity of puberty which are treated out of asylums and pass as cases of hysteria and the like we should greatly swell the number." The chapter on Homicide is practically excellent. It is unfortunate that "paranoia" is not accepted by the author, while "monomania" is retained as a term and has included under it not only *primary* cases but those *secondary* to antecedent (severe) attacks of mania, melancholia, &c., which is rather inconsequent and confusing While some five monomanias—of pride, jealousy, hoarding, persecution, and doubt—are given there is no recognition of the clinical separateness and unity of Magnan's "délire chronique à évolution systématique"—a notable omission. As would be expected the subject of the Early Mental and Moral Changes of General Paralysis of the Insane—that most fatal of the insanities—is well described and its practical and medico-legal bearings are indicated. On the longevity of some insane patients the author has interesting remarks to make (p. 199). The chapter on the Prevention of Insanity is one of the best and should be perused by every practitioner and sociologist (the author had already given public utterances on this subject at the annual meeting of the British Medical Association at Bristol in 1895). A short and concise chapter on the Insane and the Law concludes what is on the whole an interesting and readable production.

Dr. Paul Sollier follows with a short monograph on Idiocy (110 pages). He accepts the classification of Bourneville—a pathological one—into eight varieties as, on the whole, the best—viz., into hydrocephalic, microcephalic, agenetic, malformative, hypertrophic-sclerotic, atrophic-sclerotic, meningetic, and myxœdematous (cretinoid). Then follow concise accounts of etiology (due stress being laid on alcoholism and on neurotic heredity as predominating ancestral conditions and causes of the disease); pathological appearances, mainly macroscopic; and the physical appearances and "stigmata"—the hebetudinous aspect, the conditions of the nose, ears, eyelids, palate and teeth (this part but meagrely), the jaws, and genital anomalies generally being briefly described. Sufficient data and statistics are not given, considering the importance of the subject. The author's forte is undoubtedly the psychology of the idiot mind, and he has given here in the compass of 60 pages what is undoubtedly an important contribution of real scientific value. A few pages are devoted finally to diagnosis, duration, and treatment, including the education and training of the idiot and the imbecile.

Professor Lombroso's contributions to criminology are already too well known to require any detailed description of his contribution on Criminal Anthropology (50 pages). This is mainly a *résumé* of more recent work (that of the past decade) initiated by Lombroso, Benedikt, and others, and carried out by a host of other workers. Lombroso recognises the following types or species of criminals: (*a*) the epileptic criminal; (*b*) the congenital; (*c*) the criminal by passion; (*d*) the accidental criminal—who, it need scarcely be said, is not of one blood with the first two types or with the next; and (*e*) the insane criminal. The accidental criminal, however, may from repetition become a chronic and habituated one. The geographical distribution of crime, and such topics as heredity, social abuses, and other conditions conducive to the development of crime are touched upon in Lombroso's well-known way. For a work of such small scope the statistical data are ample and even too abundant.

The psychology and pathology of old age have yet to be written. Dr. Boy-Teissier of Marseilles makes a praiseworthy attempt in this direction. He avails himself of the works of many predecessors—Cruveilhier and Charcot in France, Canstatt in Germany, and Day in England. The decay and failures of old age are morphologically considered as related to (1) pure atrophy of tissue elements of the body; (2) infiltration or degeneration—fatty, albuminous, calcareous—of organs; and (3) exaggerated production of connective tissue (arterio-capillary and other fibroses). Hygienic measures to preserve a "green old age unconscious of decay" are indicated. Some of the common ailments and troubles of old age are referred to, but the subject of psychological decadence is not adequately dealt with, this being the weakest part of the production.

The Diseases of Children by Dr. Comby of Paris conclude the volume. These refer to general nutritive disorders (exclusive of rickets, already dealt with in Volume II.) and local or regional diseases of the alimentary canal, respiratory organs, &c. The author recognises and delineates a scrofulous diathesis and an arthritic, including in this latter tendencies to such diseases as migraine, asthma, coryza, pharyngitis, &c., combined with an undue irritability of the child's nervous system. Dr. Comby certainly makes a good case for this classification. The concluding chapters relate to cutaneous affections of childhood, viz.—congenital anomalies (well described), the erythemas, affections of the sebaceous and sweat glands, pemphigus, the exfoliative, vesicular, and other dermatites, the keratoses, and affections due to vegetable (fungoid) and animal parasites of the skin. The nervous diseases of children are dealt with in what is on the

whole a concise and useful summary and an excellent bibliography is appended. A general index of 17 pages concludes this work, the usefulness of which is apparent, though the various parts are of unequal merit.

An American Text-book of the Diseases of Children. Edited by LOUIS STARR, M.D., late Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; assisted by THOMPSON S. WESTCOTT, Instructor in Diseases of Children, University of Pennsylvania. Second edition, revised, two vols. Numerous Illustrations and several Coloured Plates. London: Rebman Publishing Co., Limited. 1898. Pp. 1230. Price 42*s*.

THE fact that this encyclopædic work has already reached its second edition shows that its many excellent points have been appreciated by the medical public. As we pointed out in reviewing the first edition the book is very unequal in quality. Most of the articles are written with undoubted authority by those who have special experience, but in some the various forms of disease are described as they occur in the adult, thus covering ground which has been better dealt with elsewhere. Again, while syringomyelia and other affections rarely presenting themselves for observation during childhood are described in detail there are diseases met with in characteristic forms in early life, such as the osteo-arthritis of children, which have been omitted altogether. But with this not unimportant reservation we can heartily recommend the book, many of the articles being of the first order, particularly that by the Editor on the Clinical Examination and Management of Sick Children, that on Modified Milk by Dr. Westcott, that on Tuberculosis by Dr. Osler, those on Tuberculous Meningitis and other Nervous Diseases by Dr. Hendrie Lloyd, and the admirable practical sections on Tracheotomy and Intubation by Dr. Henry Wharton. The index is very complete, and the book is well printed and strongly bound.

LIBRARY TABLE.

The Century Invalid Cookery Book. By MARY A. BOLAND. Edited by Mrs. HUMPHREY. London: T. Fisher Unwin. 1898. Price 3*s*. 6*d*.—It must be acknowledged that for invalids in particular good cookery is of the greatest importance since all food as nourishment to repair the waste of the tissues of the body may be spoiled by improper cooking. Further, bad cooking may also render otherwise good food unattractive to the invalid. To win the interest of her readers the author of this book devotes the first part of it to explanatory lessons which include general remarks upon chemical composition, applying this information to practical purpose. A full knowledge of the processes and changes in the composition of food by heat emphasises the necessity for careful attention in its preparation. The perfection of cooking is reached when the nourishment in the food is thereby made most easily available by the digestive processes. Too much stress can hardly be laid upon the want of pure air as an adjunct to good food and as an essential of health, a point which is well emphasised. The second part consists mainly of recipes which are clearly written and which should easily be followed by novices in the culinary art. Suggestions for the tasty serving of food and a chapter devoted to the feeding of children with directions for the sterilisation and preservation of milk are valuable additions to the book. It is written principally for the use of nurses and all who tend the sick, but it should be useful to a larger class and in fact to all those who would possess a knowledge of the principles underlying the advantages of well-chosen and well-cooked food. Air and food-supply are responsible for the maintenance of strength and both factors are especially indicated under the best possible conditions for those who hope to overcome the weakness following disease. The elementary scientific facts are correctly stated, but there is a curious mixture of nomenclature in the book; sometimes it is American and sometimes English. Frequently, again, the word "symbol" is used when "formula" is meant.

Merck's Digest. London Office, 16, Jewry-street.—We have received the first number of this periodical which is devoted to the publication of reports on clinical experiments made with the preparations elaborated by this enterprising firm. The present number deals with the glycerinophosphates and contains the chemistry of this interesting series of nerve nutrients and stimulants with clinical results. The periodical will be forwarded to medical men gratis on application.

JOURNALS.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., and W. F. R. WELDON, F.R.S. New Series, No. 164, Vol. XLI., Part 4. January, 1899. London: J. & A. Churchill. Price 10*s*.—This part contains the following articles. 1. On Differences in the Histological Structure of Teeth occurring within a Single Family, the Gadidæ, by Charles S. Tomes, M.A., F.R.S. Mr. Tomes shows that true dentinal tubes are not found in this very well-marked and natural group of fishes, but that they present typical vaso-dentine, which consists of a matrix permeated by a rich plexus of blood-carrying channels. These channels proceed from large axial pulp cavities. In merlucius, molva, brosmius, lota, and probably uraleptus, the vascular canals are highly developed, the outer non-vascular portion being sharply marked off by the bounding canal. In raniceps gadus and motella the vascular canals, abundant in gadus morrhua, become less frequent in the other species but always retain rounded external loops; in phycis, perhaps in uraleptus and lotella, the vascular loops are greatly reduced in number, and, indeed, in lotella they are entirely absent. Incidentally, Mr. Tomes thinks that his observations tell against the doctrine of kinetogenesis, which is to the effect that the form of a tooth is the direct consequence of the direction of stimulation which it has received by use in successive generations, for he finds that the gillrakers of the hake which are subject to the minimum of use are an exact copy of the teeth round the margins of the mouth. 2. A Description of Two New Species of Spongilla from Lake Tanganyika, by Richard Evans, B.A. These sponges were collected by Mr. J. E. S. Moore, and were taken from a depth of 350 fathoms. The sponges examined, named respectively Spongilla Moorei and Spongilla Tanganyika, grow on shells, are lobulated and somewhat woolly in aspect, an osculum of about one-eighth of an inch in diameter is situated at the tip of each of the lobes, and the dermal pores are small and are situated on the flanks of the lobes and on the intermediate depressions. Some of the spicules are diactinal monaxons, tapering to a sharp point at the two ends and without swellings on the shaft, others are similarly formed but have swellings, and others are formed by the fusion of these forms. The general arrangement of the skeleton is reticulate. All the skeletal fibres of the Spongilla Moorei are enclosed in a distinct sheath of spongin. The gemmules are spherical and small. In the Spongilla Tanganyika the spicula present megascleres and microscleres and these are thickly covered with small spines. The spongin is not so highly developed as in the Spongilla Moorei. It presents a certain degree of affinity with the species of the Spongillinæ on the one hand and of the Lubomirskiinæ on the other. 3. On Tetracotyle Petromyzontis, a Parasite of the Brain of Ammocœtes, by Albert W. Brown, B.A. Careful examination of this remarkable specimen demonstrated that it was a holostomid trematode. It presents a remarkable similarity

in appearance to the diplostomum volvens. It appears to be almost constantly present in the brain cavities of Ammocœtes, as Mr. Brown only noted its absence in one case after examining many. The parasites are found mostly in the region of the fourth ventricle and have not been observed by Mr. Brown in the adult lamprey. He thinks that they may reach the brain through the blood-vessels, but their position is difficult to explain. Their presence does not seem to incommode their host. Mr. Brown gives drawings of the animal and of the structure of its parts. 4. Studies on the Structure and Formation of the Calcareous Skeleton of the Anthozoa, by Gilbert C. Bourne, M.A., with four plates. This paper is to a considerable extent a criticism of Mr. Gordon's views on the mode of formation of madreporia. 5. The Structure and Development of the Hairs of Monotremes and Marsupials, by Baldwin Spencer, M.A., Professor of Biology in the University of Melbourne, and Georgina Sweet, M.Sc., of Melbourne University, with three plates. The hairs of these groups, it appears, are arranged in bundles with a common follicular neck, the number of hairs thus collected into one group varying from four or five to 30. The shaft is always round a bundle of muscular fibres (unstriated in ornithorrhynchus but striated in echidna) is connected with each group of hairs. The authors describe eight stages of development from the first appearance of a solid downgrowth of the epidermis to the emergence of the hair. The lumen is found at quite a late period. There is no real distinction of the inner root sheath into Huxley's and Henle's layers. The development of the hairs is essentially similar to that of other mammals. The paper is illustrated by numerous well-executed drawings. 6. Trophoblast and Serosa, a contribution to the Morphology of the Embryonic Membranes of Insects, by Arthur Willey, D.Sc. Lond. In this article the author endeavours to trace the serosa back to a primitive trophoblast and the amniotic cavity back to a primitive ventral flexure.

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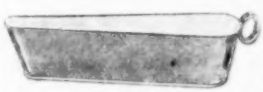
Public Health.—This, the journal of the Incorporated Society of Medical Officers of Health, contains in its February number some interesting papers. First, there is Dr. Newsholme's paper upon the Prevention of Phthisis, an abstract of which appeared in our issue of Feb. 4th. Then there is an article by Dr. John Robinson upon Slop Closets which he considers should not be used in crowded towns. Dr. William Butler publishes a paper, originally read before the Home Counties Branch of the Incorporated Society of Medical Officers of Health, upon the Value from a Public Health Standpoint of the Declining Phthisical Death-rate. Dr. Butler concludes that it is not of much service to the community to reduce the death-rate from phthisis unless some restrictions are put upon the procreation of the degenerate. He says, "A healthy people pruned of its decadents by a high mortality among its children is better than a degenerate race weakened by the survival of its effete progeny."

New Inventions.

ASEPTIC CATHETER TRAY.

THE accompanying illustration represents a tray which has been thoroughly well made in white enamelled metal at my suggestion by Messrs. Reynolds and Branson, Limited, of Leeds. The original design was carried out for me some 12 years ago by a local tinsmith.

The trays are 10½ inches long by three inches deep and are three and a half inches wide behind but taper to two and a half inches in front. They are furnished with a handle and being coated with white enamel are easily sterilised by boiling. Placed between the thighs with the narrow end pressed against the perineum they will be found most useful when drawing off urine in either sex or while washing out the bladder; during the radical treatment of hernia, varicocele, or hydrocele, and during operations on the lower abdomen they will prevent fluids getting down between the thighs. They are also suitable for operations on the breast or for empyema, the narrow end being pushed up into the axilla.



REGINALD H. LUCY, M.B. Edin., F.R.C.S. Eng.,
Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

A NEW SYPHON-HEAD.

A VERY desirable improvement has been effected in the construction of the syphon head of aerated water-bottles by Messrs. Ellis and Son of Ruthin. It enables the charging of the bottle without removing the head while it allows of absolute cleansing of all the parts as well as of the bottle itself.

The spring valve, instead of being vertical, is horizontal, the spout being much in the same position as in the ordinary design. The valve in reality forms a sort of T piece, the handle being at one end while at the other is a screw-piece which may be easily detached either for charging or cleansing. For the former purpose the head is simply screwed on to the charging apparatus, but if during charging the valve be depressed water will be rapidly forced through the bottle and spout. This arrangement, further, adds to the convenience of using the syphon. The improvement is an important one since its adoption guarantees freedom from dirt and other impurities in the water contained in the syphon.

THE "HAPPY THOUGHT" COT PROTECTOR.

To prevent falls from the cot which are a frequent cause of injury to children just beginning to walk and to climb about is the object of an invention by one of my patients. It consists of a light frame of bamboo and netting which can be easily fixed to the cot and removed at

pleasure. The child is thus prevented from falling out of bed, and can play about freely if awake and restless while the mother or nurse is still asleep. The frame can be folded up into a small space when not required. I am informed that the frame costs from 12*s.* 9*d.* to 14*s.* 9*d.* and that it may be obtained from Messrs. Maple and Co. and Messrs. Shoolbred and Co. in London, Messrs. Pim Brothers in Dublin, and others of the chief furniture makers.

Clifton. GEORGE PARKER, M.D. Cantab.

THE VALLEY OF THE THAMES AND THE THAMES CONSERVANCY BOARD.

ON Feb. 13th a deputation, introduced by Viscount Valentia, M.P., and consisting of representatives of district councils in the counties of Berkshire, Buckinghamshire, Hertfordshire, Gloucestershire, Oxfordshire, Surrey, and Wiltshire, was received at the offices of the Thames Conservancy by Sir F. Dixon-Hartland, M.P., the Chairman, and by several other members of the Thames Conservancy Board.

Viscount VALENTIA said that the representative gentlemen whom he introduced were fully impressed with the great importance of preserving the Thames from contamination, but they thought that pollution of minor streams in their particular districts was not likely to affect the purity of the river because in their opinion water became purified by a natural process of filtration on its way to the Thames. They knew that the Thames Conservancy Board under the Act of 1894 had most stringent powers, but they feared that if these were enforced to the letter unnecessary expense would be caused in the districts which they represented.

Mr. WHITE, Chairman of the Headington Rural District Council, said that the council which he represented had received notices with regard to streams three or four miles from the Thames from which he thought no possible pollution could be caused to the river. He complained that a field ditch which carried only the washings of a road was condemned and it led to a summons being issued against the Headington Rural District Council, and he suggested that this was unfair because at Magdalen Bridge at Oxford, near the Botanical Garden, a drain still discharged into the river.

Mr. HARRY BEVIS, clerk to the Cricklade Wootton Bassett Rural District Council, pleaded that the Conservators should exercise their powers in a lenient and broad spirit. He thought that the creation of a number of sewage farms along the Thames would be more prejudicial to the river than the present arrangements.

Sir F. DIXON-HARTLAND, M.P., in reply, began by pointing out that Lord Derby in reply to a criticism with regard to the barrenness of the session of 1866 had said that if they had secured, as he believed they had, the purification of their great national river their labours would not have been in vain. The Act of 1866 had been amplified and extended by the Acts of 1870, 1878, and 1894. The last Act, which was passed after a laborious report made by a Parliamentary Committee, left the Thames Conservators no option with regard to the duties which they had to perform. They had under their supervision no less than 100 district councils. Since the year 1896 only 18 convictions had taken place. Of these six occurred in the counties of Hertfordshire, Berkshire, and Buckinghamshire, and 12 in Surrey, Hampshire, and Middlesex. In addition to these cases 15 summonses had been issued, of which 10 had been adjourned and five withdrawn. During this period 10 convictions against private individuals had also been obtained. The fact that so little litigation had taken place showed that the Conservators had acted with great forbearance. Their duty was to see that neither the river nor its effluents were polluted. The Conservators had never insisted on any particular system of sewage. They had always allowed districts to decide for themselves what system it was best to carry out and local authorities had complete liberty of action in that respect. The members of the deputation should also bear in mind that in all cases the convictions which had been made were by local magistrates and that no conviction could possibly take place unless there were a real breach of the law. With regard to the delegates who had addressed the Conservators the Chairman pointed out that in the case of Oxford the sewage effluent farm had gradually improved and as soon as they had discovered pollution to exist in the city they had immediately taken steps to stop it. Headington, from which a member of the deputation had come, was one of the worst offenders. It was, indeed, the only place on the Thames where nothing whatever had been done to carry out the requirements of the Conservators. They had been most patient and had finally adjourned an imminent prosecution to March 4th next in order to give them a last chance. Reports with regard to the sewage effluents at Headington had been uniformly bad. It had been suggested that the Conservators should give a few days' notice of the time at which their inspector would visit rural districts. They had no objection to giving notice on the morning of the day on which their representative made his visit, but the Conservators did not think it wise to give a few days' notice in order that preparations might be made for his reception. The Chairman said that he had been very glad to see the deputation. Some years ago they had received one which was introduced by the Earl of Jersey and the members of that deputation, he believed, had returned satisfied with their interview with the Conservators. He was glad to say that since the year 1894 the purity of the Thames was improved by one-third. In no less than 362 places pollutions had been diverted. The district over which they had sway contained a population of 500,000 people, the work which they had to carry out was of the greatest importance, their duties were strictly laid down, and they had always been as considerate as they could having regard to their responsibilities.

At the conclusion of Sir F. Dixon-Hartland's speech Lord VALENTIA thanked the Chairman and the Board for granting the interview.

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Annales de Gynécologie et d'Obstétrique. January, 1899. Paris: G. Steinheil.—This number contains the following papers. On the Indications for the Induction of Abortion, by Professor Pinard, in which the conclusions arrived at are that neither cases of contraction of the pelvis nor cases of disease complicating pregnancy are indications for this operation and that the only real indication at the present day is when the cause of the danger menacing the mother's life is certainly the pregnancy. The Treatment of Chronic Metritis by Injection of Chloride of Zinc, by Dr. Pierre Delbet. On the Slowing of the Pulse during the Puerperium, by Dr. H. Varnier. On Vaginal Hysteropexy, by Professor Dührssen. Anomalies of the Genital Organs, by Dr. P. Delagénière. The number also includes a review of Russian medical periodicals and the usual quarterly bibliographical index.

Annales de l'Institut Pasteur. Tome xiii. No. 1, January, 1899. Paris: Masson et Cie.—This number contains the following articles: (1) Récherches expérimentales sur les Maladies des Plantes, by M. Emile Laurent; (2) Etude sur l'Immunité vis-à-vis des Composés Arsenicaux, by Dr. Beschredka; (3) Action du B. Coli et du Bacille d'Eberth sur les Nitrates, by M. L. Grimbert; (4) A Critical Review by the Editor (M. Duclaux) of a paper by Schottelius "On the Important Rôle Played in the Intestine by Bacteria." Of these the most important is that by M. Laurent on bacterial diseases among plants, giving a fascinating account of researches which not only promise to be of great value to the agriculturist but which have a most important bearing on the occurrence of diseases in epidemic form. The paper is too long to be quoted at length, but it may be mentioned that a piece of ground was taken and divided into plots, each of which was treated with a different manure. M. Laurent found that while healthy living potatoes resisted the bacterium coli those grown in soil containing an excess of chalk had their resistance weakened, so that colonies readily formed on cut surfaces of the potato while those grown in a soil without an excess of alkali continued to resist. Further, he found that by growing on this feebly-resisting potato the virulence of the organism was greatly increased, so that after being once cultivated on the potato it would at once attack the stronger tubers when inoculated and thus might give rise to an epidemic. With other organisms the tubers grown in the alkaline soil resisted best and the addition of chalk to the soil would lead to the arrest of the spread of disease from one potato to another in the same patch. In connexion with some half-dozen well-known organisms which attack higher plants it was found that modifications of the soil would so alter the resisting power of the plants that they escaped infection or recovered if infected. It seems probable that further study of "vegetable therapeutics" on these lines may give some important hints which will aid the physician in controlling disease in man.

Public Health.—This, the journal of the Incorporated Society of Medical Officers of Health, contains in its February number some interesting papers. First, there is Dr. Newsholme's paper upon the Prevention of Phthisis, an abstract of which appeared in our issue of Feb. 4th. Then there is an article by Dr. John Robinson upon Slop Closets which he considers should not be used in crowded towns. Dr. William Butler publishes a paper, originally read before the Home Counties Branch of the Incorporated Society of Medical Officers of Health, upon the Value from a Public Health Standpoint of the Declining Phthisical Death-rate. Dr. Butler concludes that it is not of much service to the community to reduce the death-rate from phthisis unless some restrictions are put upon the procreation of the degenerate. He says, "A healthy people pruned of its decadents by a high mortality among its children is better than a degenerate race weakened by the survival of its effete progeny."

New Inventions.

ASEPTIC CATHETER TRAY.

THE accompanying illustration represents a tray which has been thoroughly well made in white enamelled metal at my suggestion by Messrs. Reynolds and Branson, Limited, of Leeds. The original design was carried out for me some 12 years ago by a local tinsmith.

The trays are 10½ inches long by three inches deep and are three and a half inches wide behind but taper to two and a half inches in front. They are furnished with a handle and being coated with white enamel are easily sterilised by boiling. Placed between the thighs with the narrow end pressed against the perineum they will be found most useful when drawing off urine in either sex or while washing out the bladder; during the radical treatment of hernia, varicocele, or hydrocele, and during operations on the lower abdomen they will prevent fluids getting down between the thighs. They are also suitable for operations on the breast or for empyema, the narrow end being pushed up into the axilla.

REGINALD H. LUCY, M.B. Edin., F.R.C.S. Eng.,
Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

A NEW SYPHON-HEAD.

A VERY desirable improvement has been effected in the construction of the syphon head of aerated water-bottles by Messrs. Ellis and Son of Ruthin. It enables the charging of the bottle without removing the head while it allows of absolute cleansing of all the parts as well as of the bottle itself.

The spring valve, instead of being vertical, is horizontal, the spout being much in the same position as in the ordinary design. The valve in reality forms a sort of T piece, the handle being at one end while at the other is a screw-piece which may be easily detached either for charging or cleansing. For the former purpose the head is simply screwed on to the charging apparatus, but if during charging the valve be depressed water will be rapidly forced through the bottle and spout. This arrangement, further, adds to the convenience of using the syphon. The improvement is an important one since its adoption guarantees freedom from dirt and other impurities in the water contained in the syphon.

THE "HAPPY THOUGHT" COT PROTECTOR.

To prevent falls from the cot which are a frequent cause of injury to children just beginning to walk and to climb about is the object of an invention by one of my patients. It consists of a light frame of bamboo and netting which can be easily fixed to the cot and removed at

pleasure. The child is thus prevented from falling out of bed, and can play about freely if awake and restless while the mother or nurse is still asleep. The frame can be folded up into a small space when not required. I am informed that the frame costs from 12*s.* 9*d.* to 14*s.* 9*d.* and that it may be obtained from Messrs. Maple and Co. and Messrs. Shoolbred and Co. in London, Messrs. Pim Brothers in Dublin, and others of the chief furniture makers.

Clifton. GEORGE PARKER, M.D. Cantab.

THE VALLEY OF THE THAMES AND THE THAMES CONSERVANCY BOARD.

ON Feb. 13th a deputation, introduced by Viscount Valentia, M.P., and consisting of representatives of district councils in the counties of Berkshire, Buckinghamshire, Hertfordshire, Gloucestershire, Oxfordshire, Surrey, and Wiltshire, was received at the offices of the Thames Conservancy by Sir F. Dixon-Hartland, M.P., the Chairman, and by several other members of the Thames Conservancy Board.

Viscount VALENTIA said that the representative gentlemen whom he introduced were fully impressed with the great importance of preserving the Thames from contamination, but they thought that pollution of minor streams in their particular districts was not likely to affect the purity of the river because in their opinion water became purified by a natural process of filtration on its way to the Thames. They knew that the Thames Conservancy Board under the Act of 1894 had most stringent powers, but they feared that if these were enforced to the letter unnecessary expense would be caused in the districts which they represented.

Mr. WHITE, Chairman of the Headington Rural District Council, said that the council which he represented had received notices with regard to streams three or four miles from the Thames from which he thought no possible pollution could be caused to the river. He complained that a field ditch which carried only the washings of a road was condemned and it led to a summons being issued against the Headington Rural District Council, and he suggested that this was unfair because at Magdalen Bridge at Oxford, near the Botanical Garden, a drain still discharged into the river.

Mr. HARRY BEVIS, clerk to the Cricklade Wootton Bassett Rural District Council, pleaded that the Conservators should exercise their powers in a lenient and broad spirit. He thought that the creation of a number of sewage farms along the Thames would be more prejudicial to the river than the present arrangements.

Sir F. DIXON-HARTLAND, M.P., in reply, began by pointing out that Lord Derby in reply to a criticism with regard to the barrenness of the session of 1866 had said that if they had secured, as he believed they had, the purification of their great national river their labours would not have been in vain. The Act of 1866 had been amplified and extended by the Acts of 1870, 1878, and 1894. The last Act, which was passed after a laborious report made by a Parliamentary Committee, left the Thames Conservators no option with regard to the duties which they had to perform. They had under their supervision no less than 100 district councils. Since the year 1896 only 18 convictions had taken place. Of these six occurred in the counties of Hertfordshire, Berkshire, and Buckinghamshire, and 12 in Surrey, Hampshire, and Middlesex. In addition to these cases 15 summonses had been issued, of which 10 had been adjourned and five withdrawn. During this period 10 convictions against private individuals had also been obtained. The fact that so little litigation had taken place showed that the Conservators had acted with great forbearance. Their duty was to see that neither the river nor its effluents were polluted. The Conservators had never insisted on any particular system of sewage. They had always allowed districts to decide for themselves what system it was best to carry out and local authorities had complete liberty of action in that respect. The members of the deputation should also bear in mind that in all cases the convictions which had been made were by local magistrates and that no conviction could possibly take place unless there were a real breach of the law. With regard to the delegates who had addressed the Conservators the Chairman pointed out that in the case of Oxford the sewage effluent farm had gradually improved and as soon as they had discovered pollution to exist in the city they had immediately taken steps to stop it. Headington, from which a member of the deputation had come, was one of the worst offenders. It was, indeed, the only place on the Thames where nothing whatever had been done to carry out the requirements of the Conservators. They had been most patient and had finally adjourned an imminent prosecution to March 4th next in order to give them a last chance. Reports with regard to the sewage effluents at Headington had been uniformly bad. It had been suggested that the Conservators should give a few days' notice of the time at which their inspector would visit rural districts. They had no objection to giving notice on the morning of the day on which their representative made his visit, but the Conservators did not think it wise to give a few days' notice in order that preparations might be made for his reception. The Chairman said that he had been very glad to see the deputation. Some years ago they had received one which was introduced by the Earl of Jersey and the members of that deputation, he believed, had returned satisfied with their interview with the Conservators. He was glad to say that since the year 1894 the purity of the Thames was improved by one-third. In no less than 362 places pollutions had been diverted. The district over which they had sway contained a population of 500,000 people, the work which they had to carry out was of the greatest importance, their duties were strictly laid down, and they had always been as considerate as they could having regard to their responsibilities.

At the conclusion of Sir F. Dixon-Hartland's speech Lord VALENTIA thanked the Chairman and the Board for granting the interview.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 18, 1899.

THE Parliamentary Bills Committee of the British Medical Association has had under its consideration a Midwives Bill sent up by the Medical Acts Amendment Sub-committee. The Sub-committee had taken the Bill of the Midwives Institute, as amended to meet the views of the General Medical Council, as a basis of discussion and had subjected it to a pretty close criticism. The report of the Sub committee accepted the fact that some such Bill is likely sooner or later to be passed by Parliament and suggested such amendments in it as would still further tend to secure the objects which the General Medical Council had in view, and must keep in view, in consenting reluctantly to any legislation of this kind. There was, indeed, an attempt by Mr. GEORGE BROWN, notwithstanding his general assent to the views of the Council, to throw the whole thing overboard, as will be seen by the amendment which he proposed to the motion of Dr. WOODCOCK. Dr. WOODCOCK'S motion, which was seconded by Mr. HORSLEY, was as follows:—

"That the Bill thus amended be adopted and referred to the Council for adoption as that form of legislation on this subject which alone includes adequate safeguards both for public health and for the interests of the medical profession."

Mr. BR WN'S amendment was—

"That inasmuch as the great majority of general practitioners have repeatedly objected to the registration of midwives this committee recommend the Council to oppose the Bill."

Dr. WOODCOCK'S motion was carried. There is a sense, of course, in which the whole profession is reluctant to agree to such legislation. It is pitiable to think that any woman in the dangers of childbirth should have any attendant who does not act with the full knowledge and sense of responsibility of a qualified and registered medical practitioner. But taking the world as it is, and is likely to be for many years to come, we cannot shut our eyes to the fact that in this country a large proportion of the wives of the poorer classes are attended in their confinements by an untaught, untrained, and unregulated class of midwives whose practice the State has not prohibited, and has no intention of prohibiting, save perhaps in the sense of regulating it and subordinating it to the supervision of the medical profession. Such restraint will be imposed by a Midwives Bill, if passed by Parliament, in full accordance with the principles laid down by the General Medical Council and amplified in the Bill adopted by the Parliamentary Bills Committee of the British Medical Association.

The amendments to the Midwives Bill of the Midwives Institute which have been suggested by the Medical Acts Amendment Sub-committee are numerous. Some of them will appear to the framers of the Midwives Bill to be superfluous and to aim at provisions already involved, if not expressed, in one or other of the sections of the Bill. They are well set forth, as are the reasons for them, in the temperate and able speech of Dr. WOODCOCK. The Sub-committee wished to make clear in almost the first clause of the Bill the essentially subordinate and limited function of the midwife by defining her as "a woman who undertakes for gain to attend cases of women during natural labour and the lying-in period under the rules, regulations, and medical control or supervision set forth in this Act." We approve of this fuller definition of the new midwife in the front of the Bill. There is a very proper clause forbidding the employment of any substitute who is not licensed. The clauses of the Bill of the Parliamentary Bills Committee denying all medical function to the midwife and all right to give medical certificates also specifically forbids her, under penalty of fine or imprisonment, to give a certificate of still birth. Objections to such a clause being inserted in a Bill not dealing directly with the registration of births and deaths have been raised but they are pedantic: clearly the opportunity of such a Bill as the present should be seized to stop a great evil and danger. The Sub-committee did not approve of the recognition of the certificate of the Obstetrical Society of London. They considered that it would be better to leave the matter entirely to the Midwives Board. Perhaps the most novel feature of the Bill is that dealing with the constitution of the Midwives Board. The Board is commendably smaller than in the previous Bill of the Parliamentary Bills Committee. It is to consist of only seven members—all registered medical practitioners. One is to be appointed by the Lord President of the Privy Council, the remaining six, not by the medical corporation and the Institute of Midwives, as in the Bill of the latter body, but by the General Medical Council. Moreover, they are to be resident or practising in the different divisions of England and Wales that they may the better represent localities. Under section 6 of the Bill, sub-section 6 provides that no member of the Board shall act as teacher, instructor, or examiner of midwives, and that no member of the Board shall take any part in any inquiry respecting the conduct of any midwife to whom he or she has acted as a teacher or instructor. The latter part of this sub-section seems not unreasonable, but the exclusion of every teacher of midwives from the Board might deprive the Board of some very useful help.

Other provisions are good—viz., one giving the duties of local supervision to a committee of not less than three practitioners, to be elected by the administrative county council; one making it an offence for a midwife to fail to send for a medical man in any case which is not one of natural labour; and one requiring premises in which lying-in women are received by midwives to be subject to regulation and inspection under rules to be laid down by the Midwives Board and approved by the General Medical Council. The Parliamentary Bills Committee seems to think that the existing Midwives Bill gives no power to the Midwives Board to lay down rules and regulations for

the training and education of midwives. Surely this power is given in section 5 and its various sub-sections. However, there can be no harm in making the point more definite. On the whole, it will be seen that we approve the alterations or amendments of the Parliamentary Bills Committee. But the question is not yet solved.

A BITTER cry goes up from all the interests—and they are numerous—which in Southern Europe, and especially on the Mediterranean, subsist upon the English-speaking sojourner. The first note in the lugubrious concert was struck by France who has been heavily hit by the abstention of her British-American *clientèle*. Not only in Paris, but more particularly on the Riviera, the hotels, the restaurants, the cafés, the theatres, the public vehicles, the great shops, have not done half their usual business, while, according to a leading Parisian journal, the Mont-de-Piété has trebled or quadrupled its operations, the pledges being mainly in jewellery or in objects of artistic value—a sure sign that the prevailing impecuniosity has touched the higher social grades. Every kind of explanation is sought for this falling off or failure of the "foreign import." The Americans give France a wide berth "because of her pronounced sympathies with Spain in the late war"; the English go elsewhere "on account of the policy of pin-pricks" and of "possible hostilities." Another reason is found in the "husbanding of resources for the great Exposition of 1900!" And so on in similar strain, till the conclusion is forced upon the reflecting mind that English-speaking custom is so essential a factor in French prosperity that war between the two nations is impossible. But if France is loud in her lamentations over the abstention of the foreigner, Italy is louder still, making her voice heard, moreover, not through her journals only, but in her municipal councils and in Parliament itself. From San Remo to Palermo, from Venice to Taormina, the "missing Inglese" is felt as little short of a national calamity—the "absent visitor" being tantamount to a "present visitation." Let us illustrate by a concrete example what this arrest of an annual source of revenue means for Italians. Some years ago in Florence there was a fever scare, the dismantling of the "Centro" having led to the overcrowding of the San Frediano quarter with the inevitable result. In dread of the epidemic, the English-speaking world left "our Lady of Flowers" severely alone till the *custode* of her chief picture-gallery had to inform his principal that for January, February, and March his sale of one-franc admission tickets had been 16,000 fr. less than during the corresponding three months of the previous year—in other words, that in that particular winter there had been 16,000 fewer visitors than in the winter of the twelve-month before. This season it is no fever scare that keeps the British-American away from Italy. The same causes which explain his abstention from the French Riviera—dread of war, for instance—may, to some extent, account for his abstention from the Italian. But there are other reasons of a more permanent kind which underlie the phenomenon and it is well that Italy for her own sake should ponder them seriously, take to heart the lesson they teach, and rehabilitate herself accordingly.

In "climatic therapeutics," as in "medical meteorology," there are ever new developments inviting ever new departures. The Mediterranean littoral is giving place to health-resorts farther south and farther east. Egypt and the Nile are proving fatal to Riviera Ponente and Riviera Levante alike, and if these latter are to keep "in the running" they must "improve their condition" in every possible way. Italy, as we have said, is undergoing much heart-searching on the subject and an article in the *Nuova Antologia* by a distinguished member of her Parliament has endeavoured to "take stock of the situation" and to suggest reforms in her traditional modes of dealing with her "paying guests." The article, widely quoted and annotated by the Italian press, does certainly indicate many shortcomings and actual abuses in the treatment which she vouchsafes to the visitor who, except perhaps in the great cities or in the line of tourist traffic, is seldom allowed to forget that he is virtually in a mediæval country. But it really touches little more than the fringe of the problem, "how to attract the *forestiere*." It leaves out what is paramount and essential — the safety of the *forestiere* aforesaid not only from custom-house vexations, and hotel exactions, and mendicant importunities, and "shadowings" by touts, and luggage robberies, and brigandage itself, but from imperfect hygiene in drainage, in water-supply, in food and drink, and in sanitary requirements generally, to say nothing of the crusade renewed session by session in Parliament for replacing the English-speaking practitioner by an Italian whose linguistic acquirements seldom include more than a little bad French and whose practice—at least outside the greater medical schools—is not such as to command British-American partialities.

From time to time THE LANCET has been at special pains to show Italy how she might not only attract the *forestiere* but keep him as a yearly returning, if not perennial, guest, and a few years ago we published a series of articles[1] putting in evidence the substantial—in some respects the unique—recommendations of the North Sicilian littoral as a health resort, particularly at its chief town, Palermo. May we invite our Italian brethren, now that the question of attracting the English-speaking world is agitating the kingdom, to re-peruse and re-consider those articles and to take to heart or give practical effect to the large and liberal policy which they indicate? Not only are there other places calling out for adequate development, hygienically and professionally, not less imperiously than Palermo, but even in the traditional and well-established resorts there is much still to be done to bring them level with British-American desiderata and to justify the English-speaking practitioner in recommending them. Take the capital itself. How often has a convalescent, from malaria for instance, who has sighed for a change to purer air and fresher surroundings attainable within an hour or two of the scene of his sufferings been told that to get what he wants he must risk a tedious railway journey of over half a day? And yet little more than 10 miles from the Porta San Giovanni there are the Alban Hills and the so-called Hannibal's Camp—a mountain-plateau about 3000 ft. above sea-level, sheltered from

[1] THE LANCET, May 29th and June 5th and 12th, 1897.

all trying winds and combining hill-air and sea-breeze from the neighbouring Latin shore with a quietude, a local charm, and an historical impressiveness at once restorative and soothing—in every way welcome to invalid languor. But to get there he must undertake a journey half by rail and half by carriage on roads detestably bad; at his journey's end there is no well-appointed, well-served, well-managed hotel to receive him; and he has to fall back on the mediæval accommodation and semi-savage fare open to him at the "eagle's nest" of Rocca di Papa. Examples like these of opportunities neglected or of chances let slip by contemporary enterprise are simply innumerable and place in a rather hopeless light the misgivings of Italians as to the recovery of that "foreign element" upon which their country so depends—misgivings which lead to no organised reform or even attempt at self-rehabilitation. We hear from Naples, for example, that "non si reca nemmeno più il decimo degli stranieri soliti ad accorrervi sino a pochi anni indietro" (there no longer comes even the tenth part of the visitors who used to flock thither up to a few years ago), and the lamentations over this failure of their money-bringing presence are loud and long. But what steps are taken to attract the "straniero." Let us hope that the municipalities which are now in all the chief towns giving serious consideration to the question will combine in some well-conceived, well-supported effort to "promote" Italy's natural as well as traditional and artistic advantages, and so attract foreign sojourners to health resorts worthy of really civilised preference.

WE chronicled briefly in THE LANCET of Jan. 28th the appointment of Sir WILLIAM MACGREGOR as Governor of Lagos, mentioning that he is an M.D. of Aberdeen University and that he at one time filled important medical appointments both in Scotland and in colonial dependencies. We do not know if our readers recognise that it is not a very unusual thing for medical men to attain to high position in the State and to serve their country efficaciously in diplomatic directions; we are certain that the general public is quite ignorant of the valuable political work which has been and is being done by the medical profession.

British rule in India had its origin in certain concessions and trading monopolies granted by the Emperor of DELHI to one Dr. GABRIEL BROUGHTON, a surgeon of the East India Company's ship *Hopewell*. Out of the Emperor's complaisance toward a medical man sprang the Anglo-Indian Empire by processes which many historians have traced, and no historian more skilfully than Sir JOSEPH FAYRER in an address delivered at the first dinner of the Indian Medical Staff some two years ago. How far the empire in more recent times has drawn largely upon the services of medical men we have no need in these columns to proclaim. The work of such men as Sir JOSEPH FAYRER himself, of MACNEIL, HAMILTON, and FALCONER—to mention only the first names which occur to the recollection—has been most powerful for the consolidation of our imperial interests as well as most active for the betterment of the subject people, while every member of the Indian Medical Service feels that he has a double duty to perform—that of a medical man and that of a pioneer of British rule. Similarly English medical men have played an important part in the establishment of diplomatic and commercial relations between their country and Russia. The foundation of the Russian Company and the consequent development of trade between London and Moscow were largely due to sympathetic feelings inspired in the Muscovite Court by two English body-physicians to the reigning sovereigns—MARK RIDLEY and ROBERT JACOB, as has been told at some length in our columns.[1] In more recent times Sir RUTHERFORD ALCOCK, Sir JOHN KIRK, and Dr. JAMESON have worked in an analogous manner. Sir RUTHERFORD ALCOCK, who died but recently, left the Army Medical Service for diplomatic employ about 50 years ago and became successively British Consul at Canton, Minister Plenipotentiary to the Japanese Court, and finally Superintendent of Chinese Trade. It is the result of his work under the last title which has incited other nations to their recent action in China, for they saw what good might accrue to them from well-regulated traffic with the Celestials. Sir JOHN KIRK, who has now retired, was medical officer to LIVINGSTONE'S expedition to Eastern Africa and became Political Resident at Zanzibar and finally Commissioner at the Niger Coast. Dr. JAMESON'S success as civil administrator of Rhodesia has been clouded by his military invasion of the Transvaal, but the value of his political services has been and may yet again be very real.

There recently died at Alexandria Sir JAMES MACKIE who played a very prominent part in Egyptian affairs and who in a marked manner showed that the good diplomatist is born and is not necessarily made in Downing-street. His career forms another example of the valuable political work which may be done by the medical man. Sir JAMES MACKIE went to Egypt in 1861 as a very young man and was seen by the English residents to be made of sturdy stuff. He was appointed surgeon to the British Consulate before he was 30 years of age, and 10 years later he became sole British Delegate to the Board of Health, a board regulating under a complicated system of international control all Egyptian arrangements with regard to maritime sanitation and quarantine. It need hardly be said that his political position was a delicate one when we remember that the right of England to be in Egypt at all is seriously disputed by some English statesmen (and during MACKIE'S lifetime was disputed by many more), is strenuously denied by France, and is not very vigorously supported by the Egyptians themselves or by their over-lord, the Sultan of TURKEY. MACKIE'S work, however, was good; he was so ready to incur all responsibility for his views and to expend endless time in proving their soundness that his presence on the Board soon became welcome to all parties, and his success there proved a splendid argument in favour of English interference in Egyptian affairs. Instances might be multiplied, and we are aware that many names have been omitted that might well have been included, but enough has been said to show that the medical profession has furnished to the empire many valuable political agents—to give them the baldest description to which their services entitle them.

[1] The Twelfth International Medical Congress: Medicine Past and Present in Russia, THE LANCET, August 7th, 1897.

Annotations.

"Ne quid nimis."

THE GOVERNMENT AND VACCINATION.

ON Feb. 10th Mr. Balfour said in the House of Commons that it was not the intention of the Government to bring in any vaccination legislation in the course of the present session. To our mind this comes perilously near the breaking of a pledge, and we think that the action, or neglect of action, may cost the Government dear. It was generally understood that the Government would bring in a Revaccination Bill at an early date if the Bill of last session was allowed to become law. Undoubtedly many opponents of the present Act were persuaded to hold their hands by what they construed to be a definite promise of some measure of revaccination, and we shall have no sympathy with Lord Salisbury's Administration if the just chagrin of such legislators should be visited upon it.

THE PERIODICAL EXAMINATION OF SCHOOL CHILDREN FOR DIPHTHERIA AND OTHER INFECTIOUS DISEASES.

A THOROUGH and interesting report has recently been issued by Mr. J. D. Windle, the medical officer of health of the Southall-Norwood Urban District, on the prevalence of diphtheria in that place. The several factors which may be operative in the spread of diphtheria were all carefully examined by Mr. Windle, and after weighing the evidence he concludes that the spread and continued prevalence of the disease were mainly due to the co-mingling of infected and non-infected children at the public schools. His reasons in support of this conclusion are—(1) the cases were almost entirely confined to households of persons the children of whom attended the public schools; (2) in a large proportion of the invaded houses the first individual attacked was attending one of the suspected schools; (3) adults and children below school age were found to be proportionately rarely affected in the first instance, and when such cases occurred it was common to get a history of previous throat illness of school attendants in the same family; (4) children living in better-class houses and not attending the elementary schools showed a remarkable exemption from attack. The inmates of the St. Marylebone Schools with a population of about 400 susceptible children escaped entirely. Acting upon this view of the outbreak the schools were closed, and we are told that with their closure the notifications declined and that upon their re-opening the cases again increased. This sequence of events occurred on each occasion on which the schools were closed and re-opened. Subsequently the children in the schools were examined and some highly interesting results were obtained —results which differed very materially in the schools situated on the north side of the district from those on the south side. In the infants' school on the north side out of 128 scholars aged from three to seven years who were examined no less than 40 per cent. were found to present enlarged tonsils and other unhealthy conditions of the throat, while a large proportion had nasal discharge. In the mixed school, also on the north side, out of 222 children examined of from seven to 14 years of age 29 per cent. had enlarged tonsils and other morbid conditions of the throat. In the four schools on the south side the percentages of unhealthy throats ranged from five to 13 only. This marked disproportion of unhealthy throats amongst the scholars of the schools on the north side Mr. Windle attributes to antecedent throat illness from previous scarlet fever or diphtheria amongst the scholars. After this the north side schools were closed, thoroughly cleansed, and disinfected, and the cases of notified diphtheria dropped from 10 to zero, but increased again on re-opening. On closure for the Christmas holidays another fall occurred, followed by another rise on reopening. Further closure was, however, objected to by the school authorities, and, as an alternative, examination of the absentees was made with the view of, as far as possible, controlling the spread of the disease. A conference with the school board was, however, eventually arranged and it was decided that a bi-weekly examination of all the scholars' throats (some 1300) should be made by Mr. Windle and another medical man. It was found that an examination of the throat, of the hands and neck for desquamation, and of the nose and ear for discharge could easily be carried out. Every child with even a slight sore-throat was excluded from school and swabbings of the throat were obtained in all cases in which diphtheria was suspected. Mr. Windle states that it is impossible to speak too highly of the benefits of this systematic examination, and he thinks that its great value lay in the discovery of unreported cases, the presence of which is the chief factor in disseminating disease through the medium of schools. Such examination, however, should be continued in non-epidemic times and especially on the reassembling of the scholars. He regards the absence of objective signs as one of the reasons why diphtheria is perhaps more prone to spread through the agency of schools than are easily recognisable diseases, such as scarlet fever, measles, and whooping-cough. We congratulate Mr. Windle upon his report and we are pleased to see that the sanitary authority and the school board have been able to work together harmoniously.

LYING-IN CHARITIES AND THE MEDICAL PROFESSION IN HULL.

THE medical profession has always been friendly and considerate towards lying-in charities. Men like Dr. Robert Barnes have given their time and influence to them both as patrons and physicians, and busy practitioners in London and the provinces have accepted office in them and been at the beck and call of the midwives whenever they had a difficult case. If this amicable relation is to continue there will have to be more scruple on the part of the maternity charities than has been shown lately on the part of the Lying-in Charity of Hull. Up to 1895, according to the report of the East York and North Lincoln Branch of the British Medical Association, the relation to the medical profession was such as we have stated above. There was one midwife and, excluding honorary officers, there were two practitioners to whom she referred and who cheerfully helped her when necessary. This worked well. About 165 cases were attended annually and the charity was a proper charity confined to fit cases. In 1895 "in order to reduce the expenses of the charity" the committee determined to dispense with the services of medical practitioners. Two certificated accoucheuses were engaged and three pupils were allowed, living in the house of the Hull Lying-in Charity. And—and here comes the climax of error—private practice was allowed to the midwives, till at the present moment they are said to be attending about 1000 cases a year. We cannot believe that such a system has been entered on deliberately in the name of a charity. But the sooner it is exposed and the more completely it is left to its own merits the better. The profession in Hull are unanimous in its condemnation. We say unanimous. We must qualify that word. There is said to be one practitioner who is "covering" the midwives who when they get into trouble send for him or hand their puerperal cases over to the Hull Dispensary. This is "covering" of a very objectionable character and we must hope that when the

practitioner in question realises what he is enabling midwives to do in the way of private practice and to the injury of his fellow practitioners he will quickly withdraw from an untenable position. We may look, too, to the subscribers of the charity to see that their charity is not abused by enabling their midwives to carry on a private practice. We would even appeal to the midwives to ask whether it is in their interest at this particular moment to give such an object-lesson to the public of the abuse to which they are ready to put their certificates by converting a charity into a private practice and expelling the profession from its proper position by which alone the safe and efficient practice of midwifery can be controlled. The protest of the profession in Hull is very strong, all the more so for its extreme moderation and friendliness towards the charity. There should not be one dissentient in this protest.

THE FOUNDER OF THE LANCET.

THE occasion of the issue of a cheaper edition of "The Life and Times of Thomas Wakley" has been used by the *British Medical Journal* to review Dr. Sprigge's book at length. The favourable estimate which the reviewer has been able to give cannot fail to be of great service to the book; while we, both as editors of the journal in the columns of which the work first appeared and as son and grandson respectively of the subject of the biography, desire to testify our very cordial appreciation of the terms in which the Founder of THE LANCET is described by the *British Medical Journal*. The review has been read by us with the greatest pleasure. The *British Medical Journal* reproduces in a clever wood engraving an unfinished and speaking portrait of the late Thomas Wakley which by a curious chance came into our hands while the biography was appearing as a serial in our columns. This sketch in oils is unsigned but it is evidently the work of a thoroughly good artist and the wood engraving in the *British Medical Journal* is a very successful reproduction of it.

THE CASE OF SURGEON-MAJOR H. G. GARDNER.

FROM a printed statement which has been circulated among the Members of the House of Commons we gather that Surgeon-Major H. G. Gardner, M.B., C.M. Edin., joined the Army Medical Service on Nov. 30th, 1874, and resigned his commission in October, 1890. Surgeon-Major Gardner states that while then serving in India he was refused 90 days' privilege leave to which he was entitled and which he urgently needed with a view to providing a home for his mother then 76 years of age, and that he consequently had no option but to resign; that his name appeared in the *London Gazette* of Dec. 23rd, 1890, as retired on gratuity, and was printed in the army list up to Oct. 1897 among those "liable to recall to service," and that this liability prevented his getting employment in the Egyptian Army, in the Chartered Companies, or at home. He alleges that in 1896 the late Director-General held out hopes of his being appointed to a recruiting district and possibly of his being reinstated in the service, which hopes were repeated in 1897 and confirmed by a letter of July 7th of that year by the present Director-General. Surgeon-Major Gardner states that no reason has been vouchsafed to him why he as an army medical officer should not have been employed in preference to a civilian at a time when the Army Medical Service was notoriously underhanded, especially as such employment would have been at £150 per annum, whereas in the case of civilians it is £270. Moreover, he points out that no other officers, naval or military, resigning on gratuity are liable to recall to service. Under Section 42 of the Army Act he submits that he is entitled to an inquiry into his case by the Secretary of State for War for submission to Her Majesty. Assuming the facts to be as stated we certainly think that some Member of the House of Commons might usefully introduce a question which would elicit further information from the War Office authorities on the subject.

MANNERS AND MEETINGS.

EVERYONE knows Colonel Newcome's favourite quotation, "Ingenuas didicisse fideliter artes Emollit mores, nec sinit esse feros." Unfortunately education does not always have this effect, as may well be seen by the reported accounts of a lamentable scene which occurred on Feb. 7th at a meeting of the Stockport centre of the St. John Ambulance Association. It is not seemly for members of one profession to make insinuations against members of another. From what we can gather from the report of the meeting in the *Stockport Advertiser* of Feb. 10th it was insinuated that the secretary was making a profit out of the Stockport branch of the Association, that the accounts were improperly kept, and that the secretary was not fit for his post. The meeting was apparently very disorderly and no definite conclusion was arrived at. It is, of course, always better to have matters of this kind threshed out, but a public meeting is not the best place for such inquiry. The proper way would have been to submit the question to the head offices of the St. John Ambulance Association in London.

THE OPERATIVE TREATMENT OF PERIGASTRITIS.

AT the meeting of the Société Médicale des Hôpitaux on Jan. 6th M. Merklen related the following case. A man, aged 40 years, who had had for three weeks crises of epigastric pain which radiated into the retro-sternal and even submaxillary regions, was on Nov. 10th, 1896, suddenly seized with acute pain in the left flank with all the signs of gastric perforation. Previous adhesion limited the peritonitis and a subphrenic gaseous abscess developed. He underwent operation on Dec. 2nd; nearly a litre of pus mixed with fœtid gas was evacuated and he seemed perfectly recovered. But in January, 1897, he commenced to suffer again. The pains were so great that he spoke of suicide if he was not relieved. They came on five minutes after taking any nourishment, even milk. They were increased by standing and walking. Their point of origin was the pit of the stomach and they radiated behind the sternum and into the arms to the little fingers, thus resembling angina pectoris. The duration of the attacks was from 30 to 45 minutes. After 14 months of suffering an operation was performed in March, 1898. The stomach was surrounded on all sides by adhesions which were divided, except the principal one which was very dense, of the size of a franc, and which fixed the lesser curvature of the stomach to the left lobe of the liver. The gastric wall was here thickened and indurated; this was the position of the ulcer. The patient appeared to be relieved, but pain gradually reappeared and the crises occurred again four weeks after the operation with the same localisation and the same radiation, but they differed from those preceding the operation in that they were not provoked by food and appeared solely when the patient was standing or walking; in short, gastric peristalsis was not painful, but the dragging on the gastro-hepatic cicatrix, inevitable in the standing posture, produced pain, especially after a meal when the weight of the stomach was increased by food. The patient knew well that to lie on his back was sufficient to bring the crises to an end. The causal lesion was otherwise easily ascertained, for there was a hard and painful epigastric induration of the size of a pigeon's egg. If it were not for the history cancer might have been thought of. Another operation was performed in June. The part of the liver adherent to the stomach

(which was transformed into fibrous tissue) was removed with the thermo-cautery and the wound was closed with catgut sutures. The gastric ulcer was resected in the same way. Relief ensued. As to the diagnosis of perigastritis M. Merklen stated that persistence of pains in spite of treatment was an indication and induration in the gastric region a proof. The pains seemed to be of two kinds—those produced by food and those produced by standing. The latter were explained by the site of adhesion which usually was gastro-hepatic. M. Merklen thought that perhaps on the radiation of the pain—retro-sternal, cervical, and brachial—might be based the conclusion that an ulcer at the cardiac extremity existed with perigastritis involving the solar plexus. The treatment consisted in detaching or dividing the adhesions—a simple operation, or in resecting the ulcer and inflammatory new growths—a serious and difficult operation.

INFLUENZA.

THERE is no longer any doubt that we are face to face with an outbreak of typical influenza. Medical men are beginning to feel that strain on their time which they have experienced five or six times in the last eight years. So far the cases are not of that grave kind with which we have been too familiar in several years, but they are unmistakeable. The symptoms including the sharp pyrexia often setting in very abruptly with characteristic pains, and followed by disproportionate prostration, are unmistakeable whether with or without catarrh and whether this be tonsillar, bronchial, or intestinal. We can only hope that the epidemic will keep within moderation and that the cases will not assume a more serious form. One great point in the treatment is the thorough ventilation of the sick-room and of houses in which cases occur. Where this is neglected the cases multiply and the severity of them seems to be increased.

CRIMINAL STATISTICS FOR 1897.

THIS important blue-book has recently been issued and, to quote the opening words of Mr. H. B. Simpson's introduction to it, "the criminal statistics for 1897 present similar features to those noticed in the reports on the statistics for recent years." That is to say, the decrease in serious crime in England and Wales continues and in no particular class of indictable offence is there any increase which has not been already noted in previous years. It must be remembered that the decrease in crime is an actual diminution in the number of cases for the year, not merely a diminution when the figures are viewed with reference to an increasing population. As an instance we find the number of persons sent to trial for indictable offences in 1897 to have been 11,215, a number less than in any year since 1857, except 1896, when it was slightly lower, while the average number in the five years preceding 1897 was 11,816. Again, if indictable offences dealt with summarily are added the general diminution is still observable, although it is less marked than in the case of those more serious charges dealt with at assizes and quarter sessions. At the same time there is an increase, although not a large one, in the tale of what are known as "minor offences." An example of an indictable offence which increases instead of diminishing in frequency is that of attempted suicide. For this 190 persons were sent for trial in 1897, which is less, indeed, than in 1896 when the figures were 208, but is higher by two than the average of the five years 1893-97, while the number of suicides actually carried out in 1897 was 2785 as against 2639 in 1896. Apparently a very large number of cases of attempted suicide are reported to the police but not considered of serious import or are for other reasons not brought to trial, for in an interesting table which shows the incidence of indictable offences with regard to particular months of the year we observe that in July, 1897, the police return 245 cases, as against 235 for June, 1896, the worst month of that year in this respect. It will be worthy of note in the corresponding table in the next volume of these statistics what effect, if any, may appear to have been exercised by the great autumnal heat of the past year. Commenting generally on the introduction to the statistics we may say that it contains much excellent and valuable matter, but we regret for our own purposes of reference that the table formerly given in it of cases of murder in which capital punishment was inflicted has now for some time been omitted. The table to which we refer indicated briefly the nature of the crime and the manner in which it was committed. To it was appended a list of the names of those who had been sentenced to death for murder but who had been subsequently respited, while before 1883 in the case of these a note as to the nature of the crime was also added. Had these lists been continued they would have been of use to others as well as to ourselves who have had to deal recently with the questions of punishment in cases of death brought about by illegal operations or in the execution of felonious acts without the intention to kill. Presumably statistics of these crimes will be called for by Parliament shortly, but had they been consistently given in the blue-book on crime they would have been accessible already. Apart from this, consistency of form in an annual publication is always convenient, although we admit the value of any improvements which may suggest themselves or which may be suggested from time to time. We ourselves suggest for the benefit of the compiler of next year's introduction that the addition of page references where tables are quoted would facilitate the consideration of his work.

ON THE FORMATION OF SUGAR FROM EGG ALBUMEN.

A POINT of considerable importance both in chemistry and physiology, and undoubtedly also in medicine, is to determine whether sugar is contained in a molecule of albumin, since in a severe attack of diabetes man forms sugar in his tissues probably through the intermediation of this substance. This question has been attacked by M. Ferdinand Blumenthal who has communicated the results of his researches to the Académie des Sciences in a paper read before that body on Jan. 9th of the present year. Passing over negative statements M. Blumenthal refers to the work of Dr. Pavy on the Carbohydrates, who believes he has obtained sugar at the expense of albumin. But inasmuch as he precipitated albumin by alcohol it follows that the sugar contained in eggs remained adherent to the albumin and as he has not made any attempt to separate the two his experiments do not solve the difficulty. More recently Dr. Krawkow, in operating on albumin free from sugar, found that after heating it with hydrochloric acid he obtained carbohydrates which gave with phenylhydrazine an osazone which melted at from 182° C. to 185° C. But as no carbohydrate is known to produce an osazone having this melting point these experiments cannot be regarded as settling the question. Hofmeister also obtained in 1897 0·1 gramme of osazone from one gramme of albumin, but has not given its characters in detail. Last year (1898) M. Blumenthal submitted white of egg to the decomposing action of a solution of baryta hydrate in the first instance and then of hydrochloric acid, and by this means obtained a liquid which reduced Fehling's solution and gave with acetic phenylhydrazine an osazone the melting point of which was between 194° C. and 204° C. As this osazone was only slightly soluble in hot water, pure cold alcohol and ether, and

pure cold acetone, it closely resembled phenylglycosazone, to which it further corresponds in its microscopical characters and in its melting point, which is 205° C. for glycosazone. A specimen of this osazone obtained from white of egg, after careful purification by frequent washing with hot water and then with alcohol and ether, enabled M. Neuberg, although with great loss of material, to obtain an analysis giving C, 60·31 per cent., and H, 6·04 per cent.; and calculated for phenylglycosazone C, 60·3 per cent., and H, 6·19 per cent. It is hence certain that the sugar of which the osazone was analysed had the formula $C_6H_{12}O_6$—that is to say, it was a hexose. But as three hexoses are known giving the same osazone—glycose, mannose, and fructose—there still remained to be determined which of these hexoses was contained in white of egg. M. Blumenthal then proceeds to give the details of the process by which he attempted to determine the particular hexose present and appears to have demonstrated that it is levogyrous glucose and he believes it to be probable that from 100 grammes of albumin from eight to 12 grammes of sugar could be obtained, a distinctly interesting and important result.

A MERCIFUL JURY.

AT an inquest held by Dr. Ambrose on Feb. 13th into the death of an unfortunate woman at Walthamstow a verdict was returned by the jury showing that the deceased had died from septic poisoning after confinement, to which a rider was added that the midwife who had been in attendance upon her was deserving of the severest censure. Medical evidence was given showing that the death followed upon the midwife's neglect of cleanly precautions. The midwife, a woman 71 years of age named Avenell, who stated that she had successfully undergone the curriculum of the "Ladies' Medical College" and that she possessed the diploma of the Obstetrical Society, thanked the jury for the merciful view of the circumstances which had saved her from a verdict of manslaughter and promised to cease from acting as a midwife for the future. We do not wish to make carping inquiry into the quality of the jury's mercy, but if Mrs. Avenell was attending this poor woman upon the pretence of being a "lady doctor" the case should certainly have gone for trial, Mrs. Avenell's grey hairs and contrition notwithstanding.

THE ADMINISTRATION OF CHLOROFORM TO HORSES.

MR. KARSLAKE TASKER, writing in the *Veterinary Record*, relates his experience in giving chloroform to horses. He employs Krohne's apparatus which is based on the Junker method of forcing air through chloroform. The teaching of Dr. John Snow that chloroform acts directly in proportion to the strength of the vapour inhaled at each inspiration, affecting the centres of life in a varying order according as the vapour is presented in a weak or a concentrated state, is capable of being carried out by this plan. For while Snow worked with known quantities of chloroform in a known cubic space and so was able to give a definite percentage of the anæsthetic, by the Junker method a known quantity of chloroform is evaporated at each compression of the bellows, and so a definite amount of the chloroform is presented to the patient at each inspiration. This method has been adapted by Mr. Krohne to his very ingenious apparatus for chloroforming horses. Mr. Tasker records that he was enabled to obtain satisfactory anæsthesia in horses by using 12·93 minims per minute in one case, 12·63 minims in another, and 15·1 minims in another. This gives an average of about half a minim per respiration. The piston which takes the place of the bellows in the apparatus of Junker enables the administrator to control the percentage of vapour given. To insure success it is urged that the following rules should be attended to: (1) that the vapour be given during the whole of the period of inspiration; (2) only so much chloroform to be given at each inspiration as can be completely absorbed; (3) to commence with only one-twentieth of a minim, slowly and carefully to increase to one-tenth, one-fifth, &c., and never to go above half-minim doses. There is no doubt that the giving of chloroform by a method of known and accurately graduated doses is one which gives the administrator greater control than the older and more haphazard plans. It must be open to question, however, at present whether the optimistic views of the supporters of this method that it removes all the dangers of the anæsthetic can be accepted without some reservation. We fear that much unnecessary suffering to animals has in the past been allowed through the dread of incurring the supposed risk of giving chloroform to valuable horses, dogs, &c. As has been pointed out by Mr. Hobday and others, the lower animals can be most successfully given chloroform if they are properly dealt with, if a rational method is adopted, and if the management of the anæsthetic is committed to a trained person and not entrusted to a stable helper or a rustic, who is as incapable of giving chloroform to a horse as to a human being.

LIVINGSTONE COLLEGE.

THE annual meeting of this body was held on Feb. 9th, when the Principal (Dr. Harford-Battersby) read extracts from the report. The primary object of the existence of the College is to enable missionaries to take care of their own health and of the health of those with whom they come in contact in the far-away regions where they work. In the early days of missions the Church was undivided save for the great schism between East and West, and such medical knowledge as existed was almost entirely confined to members of religious houses. This, however, is not the case now and the average missionary is not trained in medical matters. Livingstone College attempts to supply this want and undertakes to give an elementary training in medicine and hygiene to missionaries of any denomination whether within the Church or not. Dress, food, way of life, and sanitation are all dealt with, the result being that waste of life and mental powers is to a great extent prevented. It seems to us that the great missionary societies of the Anglican communion might well coalesce and found a training college after the model of Livingstone College for this purpose.

BULBAR SCLEROSIS AFTER WHOOPING-COUGH.

THE occurrence of gross hæmorrhagic lesions in the course of whooping-cough though comparatively infrequent has been established by repeated clinical and pathological observations. The proof of a similar connexion between the same disease and sclerosis of the brain or spinal cord is by no means so well assured. A peculiar interest therefore attaches to a case described as being of this nature by Dr. G. Variot in the *Journal de Clinique et de Thérapeutique Infantiles* of Jan. 19th. The patient was a little boy, 11½ years of age, whose father was believed to have died from phthisis but whose personal history revealed nothing noteworthy until he had a well-marked but so far uncomplicated attack of whooping-cough. From two to three months after this illness his nervous disorder first appeared. He had at this time some difficulty in swallowing and some dribbling of saliva from the mouth. Then followed weakness of the upper extremities and soon afterwards an increasing difficulty in walking. Among the early symptoms there were also noticeable thickness and

embarrassment of speech. No marked muscular tremor was observed for more than six months after the above described symptoms appeared though a certain slowness and hesitancy in movement were present. While under treatment, however, he developed nystagmus and had repeated convulsive crises, and a tremor in the hands was apparent when he tried to feed himself. Dr. Variot's diagnosis in this case is that of sclerosis primarily bulbar extending to other nerve-centres and directly due to the morbid virus of whooping-cough. The relation between the supposed cause and its effects is at least very strongly suggested by the history of this case, though it is also possible that the influence of mechanical injury such as does undoubtedly result from a severe effort of coughing has been overlooked. Such an injury, though insufficient to betray itself by any striking symptom, might well become the starting-point of sclerosis. Whatever be its accurate explanation, however, this case must accentuate the importance of persevering with treatment even in a disease the course of which it can at best but modify.

THE DISCIPLINARY FUNCTIONS OF THE QUALIFYING BODIES AND THE GENERAL MEDICAL COUNCIL.

IT is painfully clear that we are only in the preliminary stage of an effective work for amending the discipline of the profession. We have already reported that the Royal College of Physicians of London objects to one of the clauses—namely, that proposing that a practitioner whose name is removed from the Register shall *ipso facto* be deprived of any degree or diploma which he may possess—suggested by the General Medical Council to amend the Medical Acts (*vide* THE LANCET, Feb. 11th, 1899, p. 385). We have now to report that the Royal College of Surgeons of England objects to both clauses. The College is advised that the amendment of the Disciplinary Clauses will seriously affect the independent action of the Council and it was unanimously resolved to inform the President of the General Medical Council that the Council of the College do not approve of the clauses in their present form. The last four words justify a hope that some modification of the clauses will overcome the opposition of the College. Meantime the disciplinary function of the bodies and of the Council is in a chaotic and discreditable position which cannot be too soon amended.

LONGEVITY IN LUNATICS.

THERE died recently at Broadmoor State Asylum a lunatic whose history furnishes an interesting comment on the above subject and has bearings on the economic question of the housing, care and treatment (and incidentally the expense which must of necessity accrue therefrom), and longevity of certain lunatics. John Quier attempted to murder and was sent to gaol in 1843 at the age of 29 years. He was then found to be insane and was sent to Bedlam where he was detained until 1864—a period of 21 years. Broadmoor Asylum being then opened he was transferred there and remained an inmate until his death in 1899. During his long confinement of 55 years Quier, it is said, showed no tendency to violence. He was a quiet, inoffensive, weak-minded man, generally engaged in doing odd jobs. He died at the age of 84 years, the cause of death being given as senile decay. In a recent work[1] Dr. Blandford mentions the following facts on longevity:—"In a small asylum for the upper classes I have under my care at the present time (December, 1896) 24 female patients. Of these four are upwards of 80 years of age; one has been an inmate of the asylum 52 years, one 49 years. Three are upwards of 70 years and they have been patients in the same house 50, 45, and 44 years." The records of other county and private asylums, especially the older ones, contain several similar cases of longevity. The economic and financial data, if available, ought to prove highly interesting.

[1] Twentieth Century Practice, vol. xii., p. 199.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

THE annual dinner of this society was held on Feb. 8th at the Trocadero Restaurant. The President, Dr. S. D. Clippingdale, was in the chair and 108 members and guests were present. Among the guests were Mr. Thompson-Sharpe, M.P., Mr. Luke Fildes, R.A., and the Presidents of the Royal Medical and Chirurgical Society, the Medical Society, the Clinical Society, the Pathological Society, the Obstetrical Society, and the Harveian Society. Between the usual toasts Dr. Arthur Haydon kindly obliged the company with some violin solos and Mr. Claude Ravenhill sang.

THE DUTY OF THE THAMES CONSERVATORS.

WE refer our readers to our brief account (p. 459) of the reception by the Thames Conservancy Board of representatives from certain district councils of the counties forming the valley of the Thames. Sir F. Dixon-Hartland's reply to the deputation is a lucid statement of the powers of the Board and of the way in which they had been exercised. His words should make the various local bodies concerned understand that certain imperative duties lie upon them. Mr. White, for example, chairman of the Headington Rural District Council, will have to make it clear to his constituents that it will be wise for them to improve the condition of their sewage effluent without delay. Mr. White spoke from what may be called the local point of view with conviction, calmness, and ability, but we feel sure that after Sir F. Dixon-Hartland's statement he must see that the position taken up by the Thames Conservators is not only firm but just.

CHLORIDE METABOLISM IN PNEUMONIA.

DIMINUTION of the chlorides in the urine in cases of pneumonia was discovered by Redtenbacher in 1850. Two years afterwards Dr. Lionel S. Beale published a paper on the subject in the Transactions of the Royal Medical and Chirurgical Society (vol. xxxv., p. 325), but of late the diagnostic value of the diminution of the urinary chlorides in cases of pneumonia has been somewhat lost sight of. The subject has lately been thoroughly investigated by Dr. Robert Hutchison, Demonstrator in Physiology at the London Hospital Medical College. His results were published in the *Journal of Pathology and Bacteriology* for December last and a reprint has been issued. His researches from both a clinical and a pathological view were most complete. With regard to the clinical facts the following are the main conclusions at which he arrives. During an attack of croupous pneumonia the chlorides in the urine are greatly diminished or may even entirely disappear. A comparison of intake and output shows that as far at least as the urine is concerned a true retention of chlorides within the body takes place. The amount retained averages about two grammes of sodium chloride for each day of the disease. The degree of the diminution, however, varies considerably in different cases but bears no relation to the degree of fever present, to the extent of lung involved, or to the presence or absence of albuminuria. This diminution of chlorides is not pathognomonic of pneumonia, but may occur in other acute fevers—notably in typhus and acute rheumatism—but is more constant in croupous pneumonia than in any other febrile disease. Examination of the urine, Dr. Hutchison points out, is thus of negative rather than of positive value in the diagnosis of pneumonia from other cases of acute pyrexia, the presence of abundant chlorides

being opposed to the diagnosis of croupous pneumonia, though their diminution, or even their absence, does not necessarily imply that the case is an example of the disease. As croupous pneumonia is the only pulmonary disease in which diminution of chlorides occurs to any appreciable extent an examination of the urine may prove of great value in the diagnosis of pneumonia from other causes of consolidation of the lung, and from empyema, pleurisy with effusion, &c. It must, however, be remembered that the chlorides may be strikingly diminished in some cases of disease of the stomach—notably in dilatation.

MUNICIPAL BACTERIOLOGY.

IN the annotation on the above subject in our issue of Feb. 11th we remarked that Camberwell had provided for bacteriological examinations in certain infectious diseases and we did not see why other parishes should not do likewise. Mr. S. R. Lovett, the medical officer of health for the St. Giles's District, informs us that his vestry have recently undertaken to provide for the bacteriological examination in suspected cases of diphtheria or enteric fever. Tubes and swabs are provided and the examination is undertaken in the conjoint laboratories. Fees are paid by the board of works for the district. Mr. Lovett informs us that he believes that similar arrangements have been made in the adjoining districts of the Strand, Holborn, and Clerkenwell. We are very glad to hear this and we hope that it will not be long before similar arrangements are in existence throughout the metropolis. The vestry of St. George-the-Martyr will perhaps now reconsider its decision.

ANOTHER ABORTIONIST.

AGAIN the solemn farce has been played through to the last scene with the usual correctness of scenic accessory and costume, including the black cap. This time the person who was condemned to death without the least likelihood of the sentence being carried out (she has since been reprieved) was an elderly woman named White who apparently for many years had practised as a midwife and had been ready to procure or to attempt to procure abortion when solicited to do so. Her patients came from the ranks of the poor and ignorant and her stock-in-trade consisted of two or three catheters, usually kept in the coal-cellar lest the police might with sudden inquisitiveness pay a domiciliary visit. No attempt seems to have been made to cleanse these instruments between one occasion for their use and the next one, and the medical evidence at the trial was to the effect that had not the septic condition of one of these filthy catheters set up inflammation in an accidental wound no abortion would have resulted from the operation performed. The death of Alice Birmingham is an example of the temptations and dangers to which women of the lower classes are exposed. The fate of Jane White may be an equally instructive object-lesson. Unfettered by any law to prevent her she practised midwifery upon such women of her class as might choose to employ her. Even the proposed legislation with regard to midwives hardly touches her. Her *clientèle* if satisfied of her skill would not have cared if a Midwives Board did not agree with them. She would have been unable to use the convenient title of her class, but beyond that the absence of her name from the roll might have served to advertise her want of scruple. Apart from this, freedom to do as she chose and a certain acquired familiarity with her subject matter—the kind of familiarity which, coupled with absolute ignorance, breeds contempt for danger—made her an abortionist when her services as such were required; and but for a rash conversation of four years before, recalled by a friend of the deceased, Jane White's victim would have remained in her grave and Jane White herself would still be plying her trade. The position is consistent enough. In a country in which every quack may practise general medicine or surgery until he kills someone there is no logical reason why a woman who cares to run a small risk should not do the same in a special department without her qualifications or her methods being subjected to the smallest inquiry. The Home Secretary stated in reply to a question in the House of Commons on Feb. 14th that the subject was engaging his anxious attention. We welcome the information.

ACCOMMODATION IN THE RABBIT.

IN a recent number of the *Ophthalmic Review* (No. 204, 1898) Mr. Priestley Smith gives some interesting experiments which he has made on the capability of the rabbit to effect accommodation in the eyes. *Primâ facie* we should have thought no doubt could exist. Rabbits are as quick as most animals in perceiving the sportsman and they must surely be capable of distinguishing near objects, such as the herbage and their own young. Nevertheless, it appears that Beer and others have been unable to satisfy themselves that these animals possessed any form of accommodation, though they had no difficulty in observing it in others. Mr. Priestley Smith by examining the eyes in rabbits which had been dosed with chloroform and chloral hydrate and in animals which had been decapitated has been able to demonstrate that these animals possess a range of accommodation of about 4 D. which though less than Hess and Heine showed to be present in apes, in which it amounted to 12 D., is yet considerable.

THE HAMPSTEAD HOSPITAL.

ON the afternoon of Feb. 5th a large meeting was held in FitzJohn's-avenue for the support of a scheme of starting a general hospital in Hampstead. The chair was taken by Sir Richard Temple who said that in the unavoidable absence of Sir Henry Burdett the committee had asked one of the consulting surgeons of the existing hospital, Mr. Edmund Owen, to lay the question fully before the meeting. Mr. Owen said that the fact of Sir Henry Burdett being, as showed by the letter just read from him, in favour of the proposed building would be a certificate to the public that it was actually required. He (Mr. Owen) was of opinion that a municipality with 70,000 inhabitants certainly deserved a hospital, especially when, as was the case with Hampstead, its geographical situation rendered the conveyance of sick and injured patients to one of the nearest of the general hospitals a matter of great inconvenience. From a long association, as consultant, with their present and inadequate building he could assure the meeting that a larger one was absolutely necessary—one containing, he would suggest, 50 beds. Though it need not be an expensive building it should be artistic and decorative, otherwise it would not be worthy of the picturesque and important district which it was to serve. He spoke very strongly against the establishment of an out-patient department in the new hospital, affirming that the outdoor charities, clubs, and dispensaries in the district were fully sufficient for all purposes, and that the creation of an out-patient department would lead to endless expense and inconvenience to the hospital and would encourage throughout all parts of the parish the habits of thriftlessness and pauperisation. Sir Samuel Wilks, consulting physician to the present hospital, also expressed the opinion that the existing institution on Parliament Hill was not worthy of so important a district as Hampstead. He spoke of the advantages of decentralisation, and remarked that as he drove through the various suburbs he found each district properly equipped with its own public institutions, its theatre, and its hospital. He thought that the time had fully come for Hampstead to acquire a

site and erect upon it a hospital of moderate size. Mr. E. Bond, M.P., Mr. J. S. Fletcher, Mr. Wightman, Mr. S. Figgis, and Mr. Malcolm, the honorary treasurer, also spoke, and Mr. Outhwaite, the honorary secretary, announced at the end of the meeting that upwards of £2000 had been promised for the scheme.

"CAVENDISH."

THE death is announced of a member of the medical profession who was very widely known in other fields. We refer to Mr. Henry Jones, M.R.C.S., of world-wide renown as "Cavendish," the authority on Whist. Mr. Jones studied at St. Bartholomew's Hospital and was in general practice from 1852 to 1869. He was a member of the Court of the Apothecaries' Company but for the last 30 years he made the exposition of indoor games the pursuit of his life.

THE PLAGUE SHIP "BHUNDARA."

WE commented some weeks ago on the unfortunate attitude of the Government of Zanzibar and of our East African Protectorate in dealing with the s.s. *Bhundara* which was carrying coolies and a cargo of rice from Karachi to Mombasa and on board of which there had been several cases of plague. First they wanted to repel the ship altogether, not caring, apparently, what became of her or of the 1000 people on board; then they wanted to impose restrictions upon the ship and upon those she carried which savoured of the useless quarantine observances of a past generation; and, lastly, they wanted to disinfect her cargo, which process, as is well known, has no medical or scientific significance. But, owing to appeals from India and to the decided action of the Foreign Office, these intentions were frustrated, and we are glad to find from a public announcement by Sir James L. Mackay that although there was a regrettable delay yet in the end the rules of the Venice Convention were observed and the general policy of Her Majesty's Government was maintained. Thus this incident terminates satisfactorily. But it should be a lesson to the Governments of those portions of our Empire who want to retain reasonable freedom for their own commerce that they should also act reasonably when arrivals in their own ports are concerned. Perhaps there are few parts of our Empire where this rule needs more observance than in India whence complaint came as to the treatment of the *Bhundara*. If ships leaving ports of India are to receive treatment on the lines of the Venice Convention all the various Governments of India should take care to act on the same lines as regards both departures from, and arrivals at, their own ports.

QUARANTINE IN THE COLONY OF VICTORIA.

WE have received the report of the Board of Health of the colony of Victoria for the years 1896–97. This report which has been presented to both Houses of the colonial Parliament and is published by the Government printer in Melbourne is not based on a compilation of vital statistics, but is a review of the work done by the Board with the object of protecting the public health and of promoting hygiene in the colony. The board consists of two nominated and seven representative members, Dr. D. Astley Gresswell, one of the nominated members, being the chairman. Perhaps the most interesting of the various sections of the report is the one on the subject of quarantine. After having considered the regulations of the English Local Government Board for dealing with cholera, yellow fever, and plague, the Victoria Board of Health submitted to the colonial Minister of Health a resolution to the effect:

"That it would not be desirable to modify the procedure at present followed in regard to quarantining for cholera, yellow fever, and plague in order to bring it into accord with the regulations now in force in the United Kingdom, and that in this connexion attention be invited to the following matters: 1. The procedure in Victoria differs from that under the regulations referred to by reason of the fact that whereas all persons on an infected ship are placed in quarantine in Victoria only those who are found to be or suspected to be infected are so dealt with in the United Kingdom, the rest being liberated after giving their names and addresses. 2. A system of medical supervision as efficient as that required under the regulations in the cases of persons liberated from an infected ship is scarcely practicable as yet in this colony. 3. ..... 4. The system followed in this colony does, in the opinion of the Board, materially reduce those risks without seriously deranging commerce, whereas for the United Kingdom the same system would be wholly impracticable."

During the period under review three steamers were quarantined for small-pox and one for Java fever.

PURE BEER.

THE report of the Beer Materials Committee is not calculated to lead to a new legal definition of beer such as must have been confidently hoped for by Mr. (now Sir) Cuthbert Quilter when he introduced his Pure Beer Bill in 1896. To demand that beer should be a fermented infusion of malt and hops only would involve "interference with business" while "it is not possible to determine by chemical analysis with sufficient certainty ..... whether malt adjuncts have or have not been used except in cases where excessive proportions of such adjuncts have been employed." The evidence of analysis, in other words, cannot be relied upon for obtaining a conviction. The committee are convinced also that "no deleterious materials are introduced into beer by way of substitutes for hops." The strong tendency of the report is, in fact, to negative all those proposals in favour of restricting the materials used in the elaboration of beer to malt and hops only in accordance with the honest formula used long before this age of substitution. Thus as long as substitutes are wholesome their employment is to be regarded as legal. We have before urged that it should be possible to direct legislation on lines which would ensure to the purchaser his right when he asks for beer to obtain beer and nothing but beer—i.e., a liquor brewed exclusively from malt and hops. Anything else should be called by another name, just as it is insisted on that butter substitutes shall be called margarine and not butter. We quite believe that the "adjuncts" and "substitutes" used in beer are not generally deleterious, but that is not the point at all, although it is an important one. Adjuncts and substitutes are not the materials in which beer had its origin and therefore to supply the purchaser with a fermented liquor made with these or in part with these is to supply him with an article not of "the nature, substance, and quality demanded." The only step which the committee suggest towards reform is that the brewing industry should be brought under stricter control "than is exercised in the case of most other industries."

THE PROFESSOR OF PATHOLOGY IN CAMBRIDGE UNIVERSITY.

DR. GERMAN SIMS WOODHEAD, M.D., F.R.S. Edin., has been elected professor of pathology in Cambridge University in the room of the late Professor Kanthack. We congratulate Dr. Sims Woodhead upon his selection for the post and the University upon having secured so admirable a man to do their work, one of the very few pathologists in the kingdom to whom the post, honourable and desirable as it is, is hardly promotion. It is unnecessary to do more than allude to Dr. Sims Woodhead's qualifications for any appointment in pathology which he might seek. His literary work and his practical work as Director of the Laboratories of the Conjoint Board of the Royal College of

Physicians of London and the Royal College of Surgeons of England, have alike shown him to be an original and resourceful master of research. He takes with him to Cambridge the good wishes of all the great number of medical men to whom his position at the Conjoint Board made him known, while we may be certain that he leaves that Board sincerely regretting his departure.

THE MIDWIVES BILL.

As will be seen from our Parliamentary Intelligence a "Bill to Promote the Better Training of Women as Midwives and to Regulate their Practice" has been introduced (by Mr. J. B. Balfour) and read a first time in the House of Commons. The second reading has been put down for Wednesday, April 12th, but on that day two other measures have precedence and it is not unlikely that their discussion may occupy the entire sitting to the exclusion of the Midwives Bill. At any rate it will be well for those who are interested in the subject—and what member of the profession is not?—to make careful note of the date.

DR. P. W. LATHAM who has so long held office as physician to Addenbrooke's Hospital, Cambridge, has signified his intention of retiring from office at Lady Day. In a graceful circular letter he says that while making the announcement with the greatest possible reluctance he has arrived at the decision in accordance with the rule prevailing at all London hospitals that at the age of 65 years a hospital physician or surgeon should vacate his post. Dr. Latham will continue his private practice amid the good wishes of many generations of Cambridge medical men.

A PLEASANT conversazione was given by Sir William and Lady Mac Cormac at the Royal College of Surgeons of England on Monday, Feb. 13th. The company included a large number of ladies. On the following day H.R.H. the Prince of Wales and a distinguished company were present at the College to hear the Hunterian Oration, which was delivered by the President of the College, Sir William Mac Cormac, and which is published in full in our present issue. Subsequently His Royal Highness dined privately with the President and Council.

THE *Times* states that "the army medical authorities have a grievance against the War Office in connexion with the recent operations in the Soudan. It is alleged that no notice was taken of an application for a hospital ship to proceed to Alexandria in time to receive the soldiers invalided from the front, and that when a second application was made—the provision for treating the sick being altogether inadequate—the reply was that it was too late for anything to be done in the matter."

MR. T. GARRETT HORDER has given notice to ask the Council of the Medical Defence Union to recommend the members to pass a resolution at the next annual meeting to the effect that in future no one shall be eligible for membership who holds office in any medical aid association. We think that the Council of the Medical Defence Union will be doing good service by such a departure.

THE first Hunterian Society Lecture will be delivered by Mr. Charters J. Symonds, F.R.C.S. Eng., in the London Institution, on Feb. 23rd, at 8.30 P.M. The subject of the lecture will be the Value of Individual Symptoms in Perforative Peritonitis, more especially in regard to Operation. Members of the profession are invited to attend.

MR. W. J. COLLINS, M.S., M.D., B.Sc.Lond., F.R.C.S. Eng., ex-Chairman of the London County Council, has been appointed by the President of the Board of Agriculture to represent the Council on a Departmental Committee to inquire into the Diseases of Animals Act.

A PLAGUE scare appears to prevail in Pretoria as a result of the recent case of plague discovered in a coolie to which we referred last week. The scare is probably quite irrational but we hope all possible means of precaution against infection will be quickly taken.

H. R. H. THE PRINCE OF WALES has consented to become President of the National Association for the Prevention of Consumption and other forms of Tuberculosis.

THE first international congress of medical officers to life assurance companies or institutions will take place in Brussels in September.

THE death, in his seventy-second year, is announced of Mr. Charles Bader, M.R.C.S. Eng., consulting ophthalmic surgeon to Guy's Hospital.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE fiftieth sitting of the Royal Commissioners was held at the Guildhall, Westminster, on Feb. 7th. The commissioners present were the Chairman (Lord Llandaff), the Right Hon. John W. Mellor, Sir John Dorington, Sir George Barclay Bruce, Mr. de Bock Porter, Mr. Robert Lewis, and Major-General Scott. The whole of the sitting was occupied by the examination of Sir Henry Knight who put in tables relating to the financial state of the Southwark and Vauxhall Company, of which he is chairman.

At the commencement of the proceedings Mr. PEMBER, Q.C., on behalf of the East London Waterworks Company, said that Mr. Crookenden, the secretary of the company, who had given evidence at the last sitting had made some mistakes in the figures which he gave. The profits of the East London Company for the half year ending Midsummer, 1898, should have been given as £90,182 10*s.* 5*d.* and the nett profits £67,609 19*s.* 3*d.*

Mr. CLAUDE BAGGALLAY, Q.C., on behalf of the Southwark and Vauxhall Company said that Sir Henry Knight did not assent to the evidence given by the witnesses of the London County Council with regard to capital expenditure, obsolete capital, and matters of that sort, but he did not wish to go into those matters unless it was the wish of the Commissioners that he should do so. He was, however, prepared to deal with the question of the revision of capital on which Mr. Gomme had given evidence at one of the earlier sittings of the Commissioners.

Sir HENRY KNIGHT, in answer to the CHAIRMAN, said that the debentures of the Southwark and Vauxhall Company were trustee stocks and in answer to Mr. MELLOR he said that trustees largely invested in them.

Mr. BALFOUR BROWNE pointed out that under the Trustee Act of 1893 the stocks of a water company which had paid 5 per cent. for 10 years became a trustee stock.

In answer to the CHAIRMAN the witness said that he thought it would not do in the case of purchase for the shareholders of the company to obtain redeemable debentures. There was always a considerable difference in the market price of redeemable and irredeemable stocks to the disadvantage of the former. The witness said that in his opinion if the water companies' undertakings were managed by the London County Council an economy of £50,000 a year would not be effected in the cost of management. On the contrary, he thought that an increase of the expenditure would take place. With regard to the interview which the witness had had with Sir Arthur Arnold on which evidence was given by

the latter at one of the earlier sittings the witness said that he had expressed an unwillingness to sell and that no terms of purchase were mentioned. If the undertakings were bought he thought it should be under the Lands Clauses Acts and the precedents established under those Acts. The witness said that the companies had no "depreciation account." The water mains lasted a very long time. No depreciation was admitted to exist with regard to the value of the buildings; the witness said that these were kept constantly repaired and were always considered as good as new. With regard to the cost of new mains a considerable amount of time was spent in exactly determining what the witness meant. If a main of a certain size is taken up and a larger one put in its place some of the money which the new main costs is paid from the current profits of the company and some is charged to capital account. If an old main is replaced by a new one of the same size the whole amount is paid for out of the profits, no sum is added to the capital account. If, for example, an old pipe which had cost £500 were replaced by one which cost £2000, of this sum of £2000 thus spent £1500 would be added to the capital account and the other £500 would be paid out of the revenue. The value of land as it appears in the capital account is the same as the price which was originally given for it. With regard to the scheme of purchase suggested by Mr. Banbury the witness thought it was a rough-and-ready scheme and that it would have to be altered in order to make it just and workable.

In answer to Sir JOHN DORINGTON the witness said that purchase should take place by arbitration.

In answer to the CHAIRMAN the witness said that the present storage capacity of the company amounted to 456,000,000 gallons. Since the statement of the company putting it at 136,000,000 gallons, reservoirs having a capacity of 320,000,000 gallons had been added.

In answer to the CHAIRMAN the witness said that he thought that some economies might be effected if the companies became federated, at about which period of the sitting the Chairman had considerable trouble in obtaining answers from the witness and he complained of the time wasted in beating about the bush.

In answer to Sir JOHN DORINGTON the witness said that he did not propose that representatives of public bodies should be on such a confederation. In his opinion an area over which the confederation should have power should be settled by experts, but he thought that it should be a very extensive tract, extending beyond the Chiltern Hills on the north to Reigate hills on the south, to the Medway on the east, and as far as Reading on the west. The private companies which now existed in Hertfordshire should be taken into this confederation.

With regard to the question of control the witness said, in answer to the CHAIRMAN, that he could not suggest any additional measure which would be useful to water consumers. He was afraid that control might be extended to such an extent that the whole of the responsibilities would be taken from the companies' hands and put on to somebody else.

On the question of the advisability of taking flood-water the witness said that he had lived on the banks of the Thames for 40 years, had watched the floods closely, and concluded that it was safe to take the water from four to six days after flood. He did not think that there was anything injurious in flood-water, but as business men they would not take thick flood-water because it would only mean putting so much deposit into their storage reservoirs and so much on to their filter beds.

In answer to the CHAIRMAN the witness said that the company did not always charge the full statutory price for water, and gave as an example the case of a wharf of which the rateable value was £11,317, and the amount on which the water rent was levied was £1886.

In answer to Mr. DE BOCK PORTER the witness said that water was only used in a very small part of these premises, that is, "just the counting-house part." He did not know whether there was a well on the premises.

In answer to Major-General SCOTT the witness said that they proposed to construct reservoirs at Molesey to give a storage capacity of 1,176,000,000 gallons. There were to be two reservoirs, one containing about 580,000,000 gallons and the other the remainder.

Major-General SCOTT pointed out that a single reservoir at Staines would occupy a much larger space than the whole area which the Southwark and Vauxhall Company proposed to use for two storage reservoirs and suggested that there was economy in a large reservoir. The witness said that the advantage of a reservoir of moderate capacity was that in case of cleaning a smaller area was thrown out of use.

In answer to Mr. DE BOCK PORTER the witness said that he was interested in the adventure of bringing sea water to London for watering roads, cleansing sewers, and baths. It would also be useful for putting out fires. In answer to the CHAIRMAN the witness said that he could not "tax his memory" as to whether the experiment of throwing salt water on fires had been made.

With regard to the flow of water which had to be maintained in the Thames the witness said he wished to satisfy the Commissioners that 100,000,000 gallons a day was a sufficient flow and the CHAIRMAN asked what proof he had in favour of the truth of that theory. The witness replied that during part of last year the flow was diminished to an amount less than 100,000,000 gallons a day and that there was no material complaint.

The CHAIRMAN pointed out that Mr. Moore of the Thames Conservancy Board had shown that people were sick of complaining because it was of no use.

In answer to Mr. BALFOUR BROWNE who examined on behalf of the London County Council the witness said that he did not object to control on the ground that the company which he represented would have to spend money which would not be remunerative; he thought that should a competent authority after inquiry prove that their works were deficient they would willingly submit to any requirements which would tend to make all the works efficient. It would be unreasonable and impossible for the Local Government Board to compel the West Middlesex Company to supply Wandsworth, Putney, and Battersea, places which are within the statutory limits of supply of that company. There was no reasonable control that could be imagined which he feared on behalf of his company.

Mr. BALFOUR BROWNE suggested that the Local Government Board might have power to compel the company to have new sources of supply or to make reservoirs.

Major-General SCOTT pointed out that in the year 1852 such a course was taken inasmuch as a transfer of the intakes of the companies was insisted upon under the Act of that year.

With regard to the question of obsolete capital Mr. BALFOUR BROWNE pointed out that the auditor appointed under the Act of 1871 had stated in his first report that as regards the Southwark and Vauxhall Company he had come to the conclusion that capital "should be relieved" to the extent of £33,082 8*s.* 8*d.* and that the accruing revenue should be charged therewith in addition to an outstanding claim of £10,722. It was therefore evident that the company had wrongly charged capital with a sum of over £33,000. The witness said that the award of the auditor had been carried out by the company and the money had been paid by annual instalments.

Mr. BALFOUR BROWNE called attention to the fact that recently a difference of opinion had existed between the auditor of the Local Government Board and the company with regard to the way in which the cost of relaying a main should be paid. The witness spoke of a slight "weeping at some of the joints" as being the cause of the difference of opinion and said that the matter had been settled to the satisfaction of the Government auditor.

Mr. BALFOUR BROWNE pointed out another case, in which there was a difference of opinion between the company and the auditor with regard to a sum of £1700, and the witness suggested that this fact showed the excellent supervision which already existed which made it impossible for them or any other company to carry to capital a sum which they ought not to put there.

Mr. BALFOUR BROWNE asked the witness at what depth the mains were laid and whether it was not a fact that they had suffered very much from the frost of 1894. The witness replied that they were gradually lowering the mains and that some of them were originally laid too near the surface. Should purchase be decided on the witness thought that it should be done by arbitration. He did not agree with one of the witnesses of the London County Council who suggested that there would be a large saving in the matter of directors' fees if the undertakings were managed by that body. The important decision in the case of Dobbs *versus* the Grand Junction Waterworks Company had interfered with the

profits of the company. In 1883 they amounted to over £80,000 a year and after that decision they went down to £55,000 and to £54,000 in the year 1886.

Lord ROBERT CECIL, on behalf of Hertfordshire, said that he had a profound distrust of Sir Henry Knight's scheme of confederation. He wished to guard the interests of Hertfordshire by saying this, but he had no wish to elaborate the matter.

In answer to Mr. DE BOCK PORTER, the witness said that in relaying the mains a part of the cost was charged to revenue and part to capital. A small proportion was charged to capital because they "had value for it" in the protection which was thereby afforded in case of frost.

With regard to the amount in the capital account for land the witness said that the amount paid originally for land at Battersea which was about £250 an acre still stood in their accounts at that price, although that sum was insignificant as compared with the present value of the property.

THE fifty-first sitting of the Royal Commissioners was held at the Guildhall, Westminster, on Feb. 13th. The Commissioners present were the chairman (Lord Llandaff), Sir John Dorington, Sir George Barclay Bruce, Mr. de Bock Porter, Mr. Cripps, Q.C., Mr. Robert Lewis, and Major-General Scott. The witnesses examined were Mr. J. W. Restler, engineer to the Southwark and Vauxhall Water Company, and Mr. Edmund Boulnois, M.P., Chairman of the West Middlesex Waterworks Company and of the Staines Reservoir Committee. Statistics were put before the Commissioners with regard to the increase of population in the Southwark and Vauxhall Company's district and with regard to the complaints received by that company from their customers from the year 1880 to the present year. In addition to these tables a statement as to the present condition of the Southwark and Vauxhall Water Company was put in. This statement gave an account of the sources of supply, of the area of supply, and a brief description of the various stations of the company, of which a full account has already appeared in THE LANCET.[1] Mr. Restler said that the area supplied by the Southwark and Vauxhall Company was 50¼ square miles in extent and that the population amounted to 819,901. The West Middlesex, the Lambeth, and the Kent Companies had power to supply within parts of their statutory area and the Lambeth Company were authorised to supply no less than four-fifths of their entire area. Since the year 1852 no pipes had been laid by these two companies in the same streets and there was no competition between the Southwark and Vauxhall and the other companies. The Lambeth Company did not charge their maximum rate in the area which was partly supplied by the Southwark and Vauxhall Company.

In answer to Sir JOHN DORINGTON the witness said that in speaking of the area thus jointly supplied he referred to streets in which pipes of the two companies were actually laid and in use at the present time.

In answer to the CHAIRMAN the witness said that under the Act of 1884 the Southwark Company were allowed to make agreements with other companies to abolish competition. The company had very few complaints with regard to the quantity and quality of the water which they supplied to their customers. During the year 1898 there was one complaint as to the quality and the amount of complaints received as to the quantity supplied were one per day per half million of persons supplied. During the drought of last summer there was no lack of water. Most of the cases in which complaints were made were due to defective fittings in the houses of the customers, and very frequently to the fact that the ball-cocks were out of order. During the months of September and October, 1898, the Southwark Company was able to supply about 5,000,000 gallons per day for the use of the customers of the East London Company.

The CHAIRMAN made an inquiry with regard to the supply of water containing 16,000 bacteria per cubic centimetre and the witness replied that an investigation was made into the matter and the sand of the filter was examined but nothing was found to account for the presence of the large number of bacteria. The filter had since been worked satisfactorily. With regard to division of the area supplied by the Southwark Company between the counties of Surrey and Middlesex the witness said that such an arrangement would not tend to economy. With regard to the question of whether the water companies ought to be made liable for the consequences of frost, drought, and accident the witness gave it as his opinion that water companies should not be liable for mishaps so caused. He was of opinion that whether the undertakings were in the hands of municipalities or of private companies the effects of frost and drought would manifest themselves equally.

The CHAIRMAN remarked that the fact that the companies were able to make charges when they did not supply water seemed to require justification. The witness contended that it was not correct to say that the companies had supplied no water and that sometimes in periods of frost as a matter of fact the quantity of water actually exceeded that supplied during a period of drought. The companies gained nothing by the frost; on the contrary, the results of it were disastrous to them.

The CHAIRMAN said that it did not seem right that high supply should be charged for when it was not given.

Mr. PEMBER, Q.C., on behalf of some of the water companies, contended that that condition was attached to the statutory regulations with regard to payment.

The CHAIRMAN remarked that he received every day letters from customers of the East London Waterworks Company who complained that although high supplies were not given no exemption had been made with regard to payment.

With regard to the future demands on the Southwark Company the witness said that it was estimated that in the year 1941 they would have to give a supply of 50,000,000 gallons a day. The cost of erecting the necessary plant and of the pumping apparatus to afford this increased supply if the water were taken from the Thames and from wells would amount to something like £2,000,000.

In answer to Mr. BALFOUR BROWNE the witness said that samples of water were taken for bacteriological examination daily.

Mr. EDMUND BOULNOIS in reply to the CHAIRMAN said that the West Middlesex Company had always been able to furnish their customers with a full supply of water. As the result of Lord Balfour's Commission which reported in favour of a continuance of supplies from the Thames and from the Lee the company had obtained from Parliament authorisation to construct large subsidence reservoirs which were capable of holding a fifteen days' supply and they had made new filter beds. More recently the West Middlesex Company had joined with the New River and Grand Junction Companies in the Staines Reservoirs Scheme by means of which they would be able to supply from 12,000,000 to 15,000,000 gallons of water daily in addition to their present supply. During the present session of Parliament the company were promoting a Bill authorising them to lay a 42-inch main from Hampton to their new reservoirs at Barnes. (A full account of these stations has already appeared in THE LANCET.[2]) When these works were carried out the company would be able to provide for the increasing demands of their district for many years. The witness thought that the New River, the Grand Junction, and the West Middlesex Companies had adopted the most economical method possible in uniting to carry out the Staines Reservoirs Scheme.

With regard to the management of the London water-supply the witness thought that it was no disadvantage that it should be in the hands of eight different companies. The directors of a water company had a great advantage over a shifting elected body which was incapable of ensuring any degree of continuity with regard to policy. If the work carried out by the companies were managed by a shifting elected body it would probably lead to an increase of highly paid officials.

The CHAIRMAN suggested that good services were sometimes performed by people who were not paid. "The London County Council," he suggested, "would scorn payment." The witness said that he did not think there would be any saving effected by an amalgamation of the companies, but he could conceive a possibility of an amalgamation for the purposes of obtaining water from a distance. The customers of the West Middlesex Company were in the fortunate position of being supplied with water at a low rental. If the water rents of the other parts of London were brought down to that level it would be necessary in order to make good the deficiency that a "rate in aid" should be levied on the whole area of London. If this were done the customers of the West Middlesex

[1] THE LANCET, March 20th and 27th, 1897.

[2] THE LANCET, Feb. 27th, 1897.

Company would necessarily suffer, for they would have to pay a rate in aid in order to lower the price of water given to the water consumers in other parts of the metropolis.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Feb. 9th, the President, Sir WILLIAM MACCORMAC, Bart., K.C.V.O., being in the chair.

The Council, having been advised by counsel that the clauses proposed by the General Medical Council for the amendment of the disciplinary clauses of the Medical Acts would seriously affect the independent action of the Council of the College, resolved unanimously that the President of the General Medical Council be informed that the Council do not approve the clauses in their present form.

A letter was read from Mrs. Henry Lee, offering to the College a portrait by Mr. James Sant, R.A., of her husband, the late Mr. Henry Lee, F.R.C.S. Eng., past member of the Council of the College. The gift was accepted with the sincere thanks of the Council.

A letter was read from the Chairman of the Education Committee of the General Medical Council, asking for information as to the desirability or otherwise of raising the standard of preliminary education for medical students, after due notice, to that of the "Senior Local" and "Higher Grade" examinations. The subject was referred to the Committee of Management.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6730 births and 4797 deaths were registered during the week ending Feb. 11th. The annual rate of mortality in these towns, which had been 15·8 and 19·4 per 1000 in the two preceding weeks, further rose last week to 21·9. In London the rate was 22·8 per 1000, while it averaged 21·3 in the 32 provincial towns. The lowest death-rates in these towns were 11·1 in Burnley, 14·0 in Brighton, 15·1 in Croydon, and 15·7 in Norwich; the highest rates were 25·0 in Manchester, 25·2 in Oldham, 30·5 in Liverpool, and 32·4 in Preston. The 4797 deaths in these towns included 403 which were referred to the principal zymotic diseases, against 329 and 340 in the two preceding weeks; of these, 114 resulted from whooping-cough, 111 from diphtheria, 68 from measles, 49 from "fever" (principally enteric), 33 from diarrhœa, and 28 from scarlet fever. No fatal case of any of these diseases was recorded last week in Norwich; in the other towns they caused the lowest death-rates in Plymouth, Wolverhampton, Bradford, and Gateshead, and the highest rates in West Ham, Cardiff, Preston, and Sunderland. The greatest mortality from measles occurred in West Ham, Bolton, and Manchester; from scarlet fever in Sunderland; from whooping-cough in Bristol, Cardiff, Preston, Halifax, and Sunderland; and from "fever" in Preston. The 111 deaths from diphtheria included 49 in London, 10 in Leeds, eight in West Ham, seven in Sheffield, six in Birmingham, six in Liverpool, and four in Leicester. No fatal case of small-pox was registered last week in any of the 33 large towns, and no small-pox patients were under treatment last week in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, Feb. 11th, was 2642, against numbers declining from 2939 to 2665 at the end of the six preceding weeks; 253 new cases were admitted during last week, against 249, 220, and 265 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 266 and 348 in the two preceding weeks, further rose last week to 481, and were 19 above the corrected average. The causes of 77, or 1·6 per cent., of the deaths in the 33 towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Salford, Bradford, and in 11 other smaller towns; the largest proportions of uncertified deaths were registered in Cardiff, Liverpool, Blackburn, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 21·3 to 28·4 per 1000, further rose to 31·2 during the week ending Feb. 11th, and exceeded by as much as 9·3 per 1000 the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 18·6 in Perth and 24·2 in Leith to 35·0 in Glasgow and 39·9 in Paisley. The 951 deaths in these towns included 37 which were referred to whooping-cough, 22 to measles, 19 to diarrhœa, nine to diphtheria, eight to "fever," and six to scarlet fever. In all, 101 deaths resulted from these principal zymotic diseases, against 78 and 95 in the two preceding weeks. These 101 deaths were equal to an annual rate of 3·3 per 1000, which was 1·5 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough, which had been 30 and 43 in the two preceding weeks, declined to 37 last week, of which 15 occurred in Glasgow, seven in Edinburgh, five in Dundee, and five in Leith. The deaths referred to measles, which had been 15 and 16 in the two preceding weeks, further rose to 22 last week, of which eight were recorded in Aberdeen, six in Glasgow, and four in Edinburgh. The 9 fatal cases of diphtheria exceeded by two the number in the preceding week, and included four in Edinburgh and three in Glasgow. The eight deaths referred to different forms of "fever" considerably exceeded the numbers recorded in recent weeks and included four in Glasgow and two in Paisley. Of the six fatal cases of scarlet fever three occurred in Glasgow and two in Aberdeen. The deaths from diseases of the respiratory organs in these towns, which had been 161 and 282 in the two preceding weeks, further rose to 346 last week, and were as many as 220 above the number in the corresponding period of last year. The causes of 38, or four per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·9 and 31·8 per 1000 in the two preceding weeks, declined to 31·6 during the week ending Feb. 11th. During the past four weeks the death-rate in the city has averaged 29·2 per 1000, the rate during the same period being 18·8 in London and 24·6 in Edinburgh. The 212 deaths registered in Dublin during the week under notice were within two of the number in the previous week, and included eight which were referred to the principal zymotic diseases, against 11 and 10 in the two preceding weeks; of these, four resulted from "fever," two from whooping-cough, one from scarlet fever, one from diphtheria, and not one either from small-pox, measles, or diarrhœa. These eight deaths were equal to an annual rate of 1·2 per 1000, the zymotic death-rate during the same period being 1·8 in London and 3·7 in Edinburgh. The deaths referred to different forms of "fever," which had been five and one in the two preceding weeks, rose again to four last week. The fatal cases of whooping-cough, which had been five and three in the two preceding weeks, further declined to two last week. The mortality from scarlet fever also showed a decline from that recorded in the preceding week. The 212 deaths in Dublin last week included 37 of infants under one year of age and 59 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed a slight decline from the numbers recorded in the preceding week. Six inquest cases and four deaths from violence were registered; and 90, or more than a third, of the deaths occurred in public institutions. The causes of 11, or more than 5 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING 1898.

COMPLETE statistics relating to sickness and mortality during the year 1898 in each of the 43 sanitary areas of London are summarised in the accompanying table. The mortality figures relate to the deaths of persons actually belonging to the various sanitary areas, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the different sanitary areas in which the patients had previously resided. With regard to

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING THE YEAR 1898.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1898.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.												
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
LONDON...	4,504,766	32	16,894	11,855	16	3024	55	247	5169	22	37,315	8·3	1	3069	581	1756	2157	3	554	9	4252	12,432	2·77	82,031	18·3	166
West Districts.																										
Paddington	127,480	—	304	260	—	74	2	5	131	—	776	6·1	—	93	8	61	44	—	17	1	83	307	2·41	2041	16·1	161
Kensington	172,174	—	472	222	8	104	4	11	160	1	1002	5·8	—	140	24	26	52	2	15	—	110	347	2·02	2809	16·4	181
Hammersmith	107,370	—	461	164	—	61	5	3	93	—	787	7·3	—	129	22	23	36	—	12	—	120	342	3·19	1964	18·3	183
Fulham	125,275	—	811	476	—	71	1	8	121	—	1488	11·9	—	59	35	61	41	—	18	1	180	395	3·16	2155	17·2	168
Chelsea	96,713	—	336	273	—	55	1	4	94	—	763	7·9	—	92	15	41	26	—	14	—	74	262	2·73	1752	18·2	176
St. George Hanover-square	80,608	1	221	111	—	39	1	3	43	—	419	5·2	1	35	4	10	16	—	9	—	29	104	1·29	1059	13·2	120
Westminster	52,574	1	99	127	—	46	1	2	50	—	326	6·2	—	52	5	22	43	—	3	—	32	157	3·00	1060	20·8	182
St. James Westminster	22,200	—	31	43	—	6	—	—	20	—	100	4·5	—	15	2	5	1	—	1	—	9	33	1·51	411	18·6	177
North Districts.																										
Marylebone	140,483	1	312	235	—	101	2	10	181	—	842	6·0	—	129	13	45	43	—	22	—	79	371	2·36	2565	18·3	132
Hampstead	78,755	—	242	135	—	47	—	1	41	—	466	5·9	—	26	3	19	27	—	10	1	24	110	1·40	917	11·7	125
St. Pancras	243,416	2	980	499	—	220	2	18	321	4	2046	8·4	—	111	53	94	87	—	41	—	214	602	2·49	4651	19·2	170
Islington	344,616	—	1336	545	2	237	1	19	280	—	2440	7·0	—	334	26	90	180	1	36	—	291	968	2·78	5712	16·6	159
Stoke Newington	34,660	—	149	54	—	18	—	3	28	—	252	7·3	—	10	1	5	9	—	2	—	27	54	1·56	475	13·7	108
Hackney	219,630	2	1024	674	—	219	3	14	300	—	2436	11·1	—	111	30	120	94	—	41	—	180	576	2·64	3583	16·4	122
Central Districts.																										
St. Giles	37,519	—	65	41	—	23	—	1	70	—	200	5·3	—	26	2	6	9	—	5	—	23	71	1·88	756	20·2	137
St. Martin-in-the-Fields	12,424	—	11	9	—	12	—	—	8	—	40	3·2	—	1	1	3	1	—	1	—	4	11	0·88	192	15·5	156
Strand	23,284	—	47	48	—	9	—	—	10	—	114	4·9	—	13	2	4	4	—	4	—	14	41	1·76	532	22·9	171
Holborn	30,066	1	97	147	—	9	—	2	41	1	298	9·9	—	35	2	22	12	—	2	—	28	101	3·37	747	24·9	221
Clerkenwell	66,120	—	331	265	—	42	1	2	69	—	710	10·8	—	61	13	36	35	—	7	—	94	246	3·75	1432	21·7	196
St. Luke	41,076	—	196	192	—	15	—	2	58	—	483	11·3	—	37	15	24	24	—	2	—	65	165	4·04	1054	25·7	150
City of London	29,088	1	79	46	—	20	—	—	19	—	165	5·7	—	8	2	10	2	—	6	1	5	34	1·17	565	19·1	128
East Districts.																										
Shoreditch	121,485	—	421	255	—	91	1	7	173	1	949	7·8	—	103	21	44	93	—	17	—	192	490	3·95	2707	22·3	196
Bethnal Green	129,027	—	433	340	—	102	2	3	324	—	1204	9·4	—	152	11	64	119	—	17	—	142	505	3·90	2872	22·3	184
Whitechapel	80,559	2	252	187	—	41	—	5	147	—	634	7·9	—	45	8	20	24	—	9	—	63	169	2·10	1622	20·2	144
St. George-in-the-East	48,241	—	143	113	—	55	—	3	74	—	388	8·1	—	33	6	14	39	—	7	—	60	159	3·31	1192	24·8	196
Limehouse	58,661	—	190	137	—	45	1	1	89	—	461	7·9	—	57	5	26	62	—	8	1	90	249	4·26	1390	23·8	208
Mile End Old Town	112,528	—	425	294	—	58	1	9	178	—	965	8·8	—	95	8	63	74	—	13	—	142	395	3·51	2229	19·9	155
Poplar	170,220	4	646	468	—	160	3	5	226	2	1514	8·9	—	130	22	89	120	—	30	1	237	629	3·72	3605	21·2	191
South Districts.																										
St. Saviour Southwark	24,562	—	79	115	—	14	—	—	35	—	243	9·9	—	17	1	15	14	—	4	—	25	76	3·09	577	23·6	211
St. George Southwark	60,466	—	309	245	3	40	1	5	71	3	677	11·2	—	45	20	36	34	—	9	—	99	241	3·99	1470	24·4	188
Newington	123,183	—	619	465	—	90	1	11	156	—	1342	10·9	—	55	24	72	45	—	10	—	182	388	3·17	2520	20·5	173
St. Olave Southwark	11,288	—	67	16	—	5	—	—	24	—	112	9·9	—	5	1	3	11	—	1	—	5	26	2·31	232	20·6	132
Bermondsey	85,738	1	458	268	—	51	—	4	88	—	870	10·2	—	59	19	44	47	—	9	—	80	258	3·02	1771	20·7	157
Rotherhithe	40,849	—	145	42	—	24	—	3	89	—	303	7·4	—	33	10	11	15	—	1	—	21	91	2·24	773	19·0	169
Lambeth	304,073	1	998	823	1	164	13	14	284	7	2305	7·6	—	135	30	114	159	—	35	1	281	755	2·50	5422	17·9	154
Battersea	171,921	4	606	800	1	94	—	10	189	—	1904	11·1	—	114	28	120	68	—	14	2	157	503	2·93	2897	16·9	176
Wandsworth	202,526	1	706	602	—	123	1	20	235	—	1688	8·4	—	111	16	89	86	—	16	—	166	484	2·40	2902	14·4	144
Camberwell	261,189	5	964	695	—	117	3	11	233	—	2018	7·8	—	117	13	87	128	—	26	—	252	628	2·41	4261	16·4	160
Greenwich	180,441	—	660	555	1	187	3	10	208	—	1614	9·0	—	108	21	41	124	—	32	—	222	555	3·08	3336	18·5	176
Lewisham (excluding Penge)	88,562	—	203	283	—	45	—	4	54	1	590	6·7	—	35	10	26	32	—	6	—	112	221	2·50	1350	15·3	161
Woolwich...	41,478	—	204	109	—	22	—	3	43	—	381	9·2	—	58	5	19	27	—	8	—	54	171	4·13	844	20·4	173
Lee	39,717	3	158	162	—	23	—	4	43	—	393	9·9	—	6	7	14	14	—	7	—	30	78	1·97	592	14·9	160
Plumstead	62,531	—	422	111	—	28	1	7	47	3	619	9·9	—	58	12	15	33	—	3	—	57	178	2·85	1016	16·3	155
Port of London	—	2	2	4	—	19	—	—	1	—	28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 312 cases of membranous croup.

† Including deaths from membranous croup.

the notified cases of infectious diseases in London during 1898, it appears that the proportion of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 8·3 per 1000 of the population, estimated at 4,504,766 persons in the middle of the year. In the three preceding years the rates were 9·5, 11·1, and 10·2 per 1000 respectively. Among the various sanitary areas the lowest rates were 3·2 in St. Martin-in-the-Fields, 4·5 in St. James Westminster, 4·9 in Strand, 5·2 in St. George Hanover Square, 5·3 in St. Giles, and 5·7 in City of London; the highest rates were 10·8 in Clerkenwell, 10·9 in Newington, 11·1 in Hackney and in Battersea, 11·2 in St. George Southwark, 11·3 in St. Luke, and 11·9 in Fulham. The prevalence of small-pox in London showed a further marked decline during 1898, the new cases notified being only 32, against 2813, 1192, 979, 225, and 104 in the five preceding years; of these, five belonged to Camberwell, four to Battersea, four to Poplar, three to Lee, and two each to St. Pancras, Hackney, Whitechapel, and Port of London sanitary areas. The number of small-pox patients admitted into the Metropolitan Asylums Hospitals during 1898 did not exceed five, and no case remained under treatment at the close of the year. The prevalence of scarlet fever in London during 1898 showed a marked further decline, the number of cases notified being 16,894, against 25,647 and 22,850 in the two preceding years. This disease was proportionally most prevalent in Fulham, Clerkenwell, St. George Southwark, Newington, St. Olave Southwark, Bermondsey, and Plumstead sanitary areas. During the year under notice 12,480 scarlet fever patients were admitted into the Metropolitan Asylums Hospitals, against 11,271, 15,982, and 15,256 in the three preceding years; the number of cases under treatment, which had been 3506 at the beginning of the year, was 2883 at the end of December last. Diphtheria also showed a decreased prevalence during 1898, the cases notified being 11,855, against 11,223, 13,808, and 13,192 in the three preceding years. This disease showed the highest proportional prevalence in Fulham, Hackney, Holborn, Clerkenwell, St. Luke, St. Saviour Southwark, St. George Southwark, Battersea, and Lee sanitary areas. The Metropolitan Asylums Hospitals contained 1065 diphtheria patients at the beginning of 1898; 7390 cases were admitted during the year, and 1239 remained under treatment at the end of December last. The prevalence of enteric fever in London during the year under notice almost corresponded with that recorded in 1897, 3024 cases being notified, against 3103 in the preceding year; among the various sanitary areas this disease was proportionally most prevalent in Westminster, St. Pancras, Hackney, St. Martin-in-the-Fields, St. George-in-the-East, Poplar, and Greenwich. The number of enteric fever patients admitted into the Metropolitan Asylums Hospitals during 1898 was 1116, against 661, 600, and 939 in the three preceding years, and 255 cases remained under treatment at the end of December last. Erysipelas showed the highest proportional prevalence in St. Giles, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, St. Olave Southwark, and Rotherhithe sanitary areas. The 247 notified cases of puerperal fever showed a further slight decline from the numbers recorded in the two preceding years; 20 belonged to Wandsworth, 19 to Islington, 18 to St. Pancras, 14 to Hackney, 14 to Lambeth, 11 to Kensington, 11 to Newington, and 11 to Camberwell sanitary areas.

During the year under notice the deaths of 82,037 persons belonging to London were registered, equal to a rate of 18·3 per 1000, against 19·4, 18·2, and 17·7 in the three preceding years, 1895–6–7. This rate was 1·0 per 1000 below the average rate in the 10 preceding years, 1888–97. In the various sanitary areas the lowest death-rates were 11·7 in Hampstead, 13·2 in St. George Hanover-square, 13·7 in Stoke Newington, 14·4 in Wandsworth, 14·9 in Lee, and 15·3 in Lewisham (excluding Penge); the highest rates were 23·6 in St. Saviour Southwark, 23·8 in Limehouse, 24·4 in St. George Southwark, 24·8 in St. George-in-the-East, 24·9 in Holborn, and 25·7 in St. Luke. Taking the five groups of sanitary areas the rate of mortality during 1898 was equal to 16·9 in the north, 17·0 in the west, 17·7 in the south, 21·7 in the east, and 22·1 in the central districts. To the principal zymotic diseases 12,482 deaths were referred during the year under notice; one resulted from small-pox, 3069 from measles, 531 from scarlet fever, 1756 from diphtheria, 2157 from whooping-cough, three from typhus, 554 from enteric fever, nine from simple and ill-defined forms of fever, and 4352 from diarrhœa. These 12,482 deaths were equal to an annual rate of 2·77 per 1000, against 2·62, 3·11, and 2·57 in the three preceding years. Among the various sanitary areas the zymotic death-rates ranged from 0·88 in St. Martin-in-the-Fields, 1·20 in St. George Hanover-square, 1·40 in Hampstead, 1·51 in St. James Westminster, 1·56 in Stoke Newington, and 1·76 in Strand, to 3·90 in Bethnal Green, 3·95 in Shoreditch, 3·99 in St. George Southwark, 4·04 in St. Luke, 4·13 in Woolwich, and 4·26 in Limehouse. Only one fatal case of small-pox was registered in London during the year under notice, the corrected average number in the 10 preceding years being 44; this case belonged to St. George Hanover-square sanitary area. The 3069 deaths referred to measles were 301 above the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Hammersmith, Chelsea, St. Margaret Westminster, Islington, Holborn, Bethnal Green, Limehouse, and Woolwich. The 531 fatal cases of scarlet fever were as many as 435 below the corrected average number; this disease was proportionally most fatal in Fulham, St. Pancras, St. Luke, St. George Southwark, Bermondsey, and Rotherhithe sanitary areas. The 1756 deaths referred to diphtheria were 405 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Hackney, Clerkenwell, St. Luke, Mile End Old Town, St. Saviour Southwark, St. George Southwark, Newington, and Battersea. The 2157 fatal cases of whooping-cough were 364 below the corrected average number; this disease was proportionally most fatal in St. Margaret Westminster, Shoreditch, Bethnal Green, St. George-in-the-East, Limehouse, Poplar, and St. Olave Southwark sanitary areas. The three deaths from typhus included two in Kensington and one in Islington sanitary areas. The 554 fatal cases of enteric fever were slightly below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in St. Pancras, Hackney, Strand, City of London, Greenwich, and Woolwich. The 4352 deaths from diarrhœa were as many as 1354 above the corrected average number; among the various sanitary areas this disease was proportionately most fatal in Fulham, Clerkenwell, St. Luke, Shoreditch, Limehouse, Poplar, St. George Southwark, and Newington. In conclusion, it may be stated that the mortality in London during 1898 from these principal zymotic diseases was about 3 per cent. above the average, owing to the excessive fatality of summer diarrhœa.

Infant mortality in London last year, measured by the proportion of deaths under one year of age to registered births, was equal to 166 per 1000, a higher rate than in any of the 10 preceding years, during which period the rate averaged 155 per 1000. The rates of infant mortality in the various sanitary areas ranged from 108 in Stoke Newington, 120 in St. George Hanover-square, 125 in Hampstead, 128 in City of London, 132 in Marylebone and in St. Olave Southwark, and 137 in St. Giles, to 191 in Poplar, 195 in St. George-in-the-East, 196 in Clerkenwell and in Shoreditch, 208 in Limehouse, 211 in St. Saviour Southwark, and 221 in Holborn.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

FLEET SURGEON ALFRED HENRY MILLER has been placed on the Retired List at his own request.

The following appointments have been made:—Fleet Surgeon Thomas E. H. Williams to the *Defiance*. Staff Surgeon Walter G. Axford to the *Pylades*. Surgeons: Robert H. Mornement to the *Vivid*, for disposal; Harold Huskinson to the *Boscawen*, for the *Agincourt*; Richard F. Clark to the *Niobe*; H. C. Whiteside to the *Pembroke*; C. C. Macmillan to the *Wildfire*; and George Gibson to the *Tamar*.

ROYAL ARMY MEDICAL CORPS.

The under-mentioned Captains to be Majors, dated Feb. 5th, 1899:—William J. Trotter, Frederick J. Morgan, William H. Horrocks, Charles H. Hale, D.S.O., Hugh C. Thurston, Bertal H. Scott, Walter C. Poole, Oliver R. A. Julian, George Raymond, Eustace A. Burnside, Thomas McCulloch, Alfred B. Hinde, Alexander Y. Reily, John W. Cockerill, John Ritchie, Harry St. George S. Hore, Stuart Macdonald, Alexander O. C. Watson, Edward W. Gray, David Stiell, Lawrence E. A. Salmon, George A. Wade,

James Minniece, Maurice P. C. Holt, William L. Gray, Edward G. Browne, James C. Morgan, Herbert I. Pocock, George Hilliard, C.M.G., Charles R. Elliott, Charles A. Young, John W. Bullen, James C. Weir, Benjamin J. Inniss, Robert C. Thacker, Stephen F. Clark, and Edward M. Hassard.

Major C. H. Burtchaell proceeds to Woolwich for duty. Captain G. S. Crawford has arrived in Dublin for duty. Lieutenant A. B. MacCarthy proceeds from Dover to Lydd to assume medical charge of troops and Station Hospital. Major H. J. Barnes has arrived in the Eastern District. Lieutenant J. G. Gill is posted to Canterbury, and Lieutenants G. C. Phipps and R. S. Roger to Western Heights, Dover, for duty.—Captains J. H. Rivers and H. A. Bray are selected for service with the Egyptian Army.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Captain L. Rogers (Bengal) are placed temporarily at the disposal of the Government of Bengal, with effect from Nov. 15th, 1898, but he will continue to officiate as Imperial Bacteriologist to the Government of India during the absence on leave of Dr. Lingard, or until further orders.

VOLUNTEER CORPS.

Royal Engineers: 1st Newcastle-on-Tyne: Surgeon-Captain T. A. Dodd to be Surgeon-Major. *Rifle:* 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment: Frederick Edward Apthorpe Webb to be Surgeon-Lieutenant. 3rd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment): Reginald George Hann to be Surgeon-Lieutenant. 1st (Pembrokeshire) Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant J. H. H. Williams resigns his commission. 2nd Tower Hamlets: Edward Thomas McDonnell to be Surgeon-Lieutenant.

VOLUNTEER INFANTRY BRIGADE.

West London: Surgeon-Captain H. G. Thompson, 1st Volunteer Battalion the Royal Fusiliers, to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Brigade.

ROYAL ARMY MEDICAL CORPS EXAMINATION.

The following is a list of the successful candidates for commissions in the Royal Army Medical Corps at the recent examination in London:—

Names.	Marks.	Names.	Marks.
G. G. Delap	2393	C. C. Murison	2052
F. Warren	2388	H. B. Onraet	2047
R. A. Cunningham ...	2385	P. H. Falkner	2043
V. J. Crawford	2384	H. F. Hart	2025
F. J. Palmer	2375	L. F. F. Winslow	2016
O. Challis	2360	H. H. Norman	1971
H. Simson	2316	A. Chopping	1935
T. G. N. Stokes	2282	J. J. W. Prescott	1930
S. G. Butler	2151	O. W. A. Elsner	1925
G. H. Irvine	2140	A. L. A. Webb	1914
W. A. Woodside	2133	E. E. Ellery	1899
W. R. Blackwell	2109	H. M. Nicholls	1846

INDIAN MEDICAL SERVICE.

The following candidates for Her Majesty's Indian Medical Service were successful at the competitive examination held in London on Feb. 3rd, 1899:—

Names.	Marks.	Names	Marks.
C. Dykes	3457	A. B. Fry	2708
W. E. McKechnie	3276	E. C. G. Maddock	2685
R. D. W. Greig	3275	A. W. Tuke	2682
D. McCay	3119	F. C. Lewis	2574
J. J. Urwin	3069	M. W. Manuk	2562
W. F. Harvey	3037	W. H. Tucker	2432
H. D. Pelle	2990	C. S. Lowson	2390
W. C. H. Forster	2949	J. H. L. Beaman	2369
D. H. F. Cowin	2927	W. H. Dickinson	2296

INCREASE OF THE NAVAL MEDICAL DEPARTMENT.

The *Army and Navy Gazette* of Feb. 11th announces that the Naval Medical Department is to be largely increased in consequence of the additional requirements of an increased fleet. 50 officers are to be added progressively to the list, including nine of the senior grades. The establishments on the Mediterranean and China stations may, our service contemporary thinks, be afforded a larger professional staff. In connexion with this subject of the increase which has been made to the strength of the British navy of late years it may be mentioned that great activity has been and is still being displayed by the French at Toulon in the arming of ironclads and the construction of cruisers and torpedo-boats. It is therefore probable that, under these circumstances, the strength of the British fleet in the Mediterranean will not, at any rate, be decreased.

THE FINANCES OF INDIA.

Notwithstanding the very trying circumstances to which our Indian Empire has been exposed and under which it has been labouring of late years—namely, plague, famine, and a big war on the frontier—the finances of the country are sound and a considerable surplus may, we learn, be expected in the forthcoming Indian Budget. The Military and Public Works Departments have large unexpected balances from their estimated cost and the railways are stated to have done remarkably well during the year. Money, it may be said, measures everything; and while the state of the Indian exchequer speaks well for the way in which that country is administered it holds out the hope that progress may continue to be made in the improvement of the public health and the prosecution of sanitary works in India.

THE TRANSPORT OF SICK SOLDIERS.

A correspondent in the *Morning Post* of Feb. 14th severely takes to task the Army Medical Service for incompetency in dealing with sick troops and in particular characterises the medical arrangements made for the Salisbury Plain manœuvres as "mediæval in type." We are quite aware of the fact that there are many matters connected with the Army medical arrangements that stand in need of reform, but it is the War Office who are to blame and not the Medical Department, who are hampered by it. We do not fear that the public will be misled by the invective of our contemporary's correspondent who takes shelter under anonymity, but it is only fair to the Army Medical Service that we should call attention to the matter.

HONORARY SURGEONS TO THE VICEROY OF INDIA.

Surgeon-General R. Harvey, C.B., D.S.O., I.M.S., Surgeon-General W. S. M. Price, A.M.S., Colonel D. O'C. Raye, I.M.S., Colonel D. Sinclair, C.S.I., I.M.S., Colonel W. P. Warburton, C.S.I., I.M.S., Lieutenant-Colonel G. D. Bourke, R.A.M.C., Lieutenant-Colonel A. J. Willcocks, I.M.S., and Lieutenant-Colonel P. H. Browne, C.I.E., I.M.S., have been appointed honorary surgeons to the Viceroy of India.

Correspondence.

"Audi alteram partem."

"REGINA v. REICHARDT."

To the Editors of THE LANCET.

SIRS,—I will not take up your space by discussing with Mr. Sers "what constitutes insanity." My intention was to point out that, admitting the poor lady who drowned herself to have been temporarily insane, the Lunacy Act was, I suppose, framed that the insane might have every possible advantage in helping them to recover. But if every case of temporary insanity treated away from home must be put under certificates before it is treated because this is the law, then for hundreds of cases, thousands of cases, not the best for, but the very worst against, their recovery is done. The rigid letter of the law may say you must do this or that, but you cannot treat disease by Act of Parliament, and in the administration of the Act considerable latitude ought to be allowed in adapting it to the treatment of disease. I cannot conceive how, when three qualified men of good reputation have separately decided that A or B is not a case to be placed under certificate, the law can step in and say it is. It is an attempt on the part of the law to go beyond its domain and to treat disease, and that attempt ought to be resisted in all just cases. I trust that the endeavour to improve the Act in this respect that Dr. Rayner speaks of may soon be an accomplished fact, for a prosecution such as that of Regina *v.* Reichardt seems to me a positive scandal, although I am of course quite ready to admit that the Commissioners only acted as they considered their duty compelled them.

I am, Sirs, yours faithfully,

Feb. 14th, 1899. DR. JAMES F. GOODHART.

THE SURGICAL AID SOCIETY AND ITS METHODS.

To the Editors of THE LANCET.

SIRS,—Most surgeons are under the impression that this body has for its object the providing of surgical apparatus to the poor, chiefly hospital patients, on the recommendation or certificate of a surgeon only as stated in their advertisements.

The following incident which has recently occurred and which I am led to believe is not an isolated case shows how grievously their confidence may be misplaced and requires an explanation from the society. A little child, under my care at the Children's Hospital, Shadwell, was recommended by me to get an apparatus and the requisite number of letters was collected. A lady interested in the child's welfare and who originally asked me to see her took her up to Salisbury-square and was there told by an elderly official that the doctor had ordered quite the wrong thing. She was advised to see another surgeon and sent away with a printed paper bearing the name of a surgeon to the National Orthopædic Hospital, Great Portland-street, with the cheering prospect of getting much more efficient treatment. Fortunately she refused to be cajoled by any such seductive offer and returned to me with the document. The first question I would ask is—Does the society or does it not provide apparatus as they state on the recommendation of any surgeon? If they do not then let the profession openly know that it is provided only subject to the approval of a specialist. What is absolutely indefensible is the flagrant attempt to divert patients from one surgeon to another, to say nothing of destroying the patient's confidence by the delicate suggestion of his incompetence. As this is a matter of great importance to hospital surgeons I trust you may find space for it in your valuable journal.

I am, Sirs, yours faithfully,
HY. BETHAM ROBINSON.

Upper Wimpole-street, W., Feb. 13th, 1899.

MEDICAL AID ASSOCIATIONS.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to ask your readers for copies of reports of medical aid associations?

I am, Sirs, yours faithfully,
T. GARRETT HORDER.

32, Windsor-place, Cardiff, Feb. 7th, 1899.

INSTRUCTION IN ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—Is it not high time that the administration of anæsthetics was systematically taught in our medical schools? At present a medical man as soon as he is qualified is supposed to be able to administer anæsthetics, although he has probably never received systematic instruction in this subject. This is not fair either to the medical man or to the patient. I should like to offer the following suggestions: 1. There should be attached to all hospitals in connexion with medical schools an honorary anæsthetist who should rank with the visiting staff and who should instruct the medical students, both practically and by lectures, in the administration of anæsthetics. 2. The General Medical Council should make this instruction compulsory. 3. No hospital should appoint as resident anyone who had not received such instruction.

I am, Sirs, yours faithfully,
CHARLES POWELL WHITE.

Leeds, Feb. 7th, 1899.

THE DUTY OF THE PUBLIC VACCINATOR.

To the Editors of THE LANCET.

SIRS,—The public vaccinator of the —— district appears to be sending out notices to the parents of unvaccinated children *irrespective of their position*, stating that he intends to call on a certain date to "offer to vaccinate" their child. This is followed in due course by the visit and a threat that the visit will be repeated at intervals until the vaccination is permitted. At least, this was done to one of my patients, the vaccination of whose child was postponed by me on account of sickness. I consider the action of the public vaccinator, to say the least, ungentlemanly and presumptuous and I can assure him, firstly, that the child in question will not be vaccinated until I consider it in a proper state of health, and secondly, that when the child is vaccinated it will not be by the public vaccinator of ——.

But what I desire to ask you, Sirs, is whether this procedure is sanctioned by the Local Government Board. I may add that the father of the child is in a lucrative business, has never had any children vaccinated at the expense of the ratepayers, and was greatly astonished at the public vaccinator's visit. I enclose the notice sent.

I am, Sirs, your obedient servant,
Feb. 12th, 1899. L.R.C.P., M.R.C.S.

THE NEW VACCINATION ACT: "COMFORT" FROM THE LOCAL GOVERNMENT BOARD.

To the Editors of THE LANCET.

SIRS,—Early in December I asked my guardians to come to an agreement *re* the new vaccination fees. Their reply was a notification of a "resolution" (received on Dec. 31st) that they would pay the minimum fees. I then put it to the Local Government Board that the fault was not mine that no agreement had been arrived at and asked whether, if I refused the guardians' fees, the guardians could summarily dismiss me. I also asked whether a mere "resolution" of the guardians constituted an "agreement" as required by Article 4 of the General Order. The Local Government Board replies are as follows (taking the last question first): "*A resolution of the guardians does not constitute an 'agreement.'*" One would think from this that the Local Government Board would at once itself determine the fees to be paid in accordance with its own "General Order." But not so. I am informed that notwithstanding the neglect of the guardians to carry out the Order it is still within their power to terminate my contract should I fail to comply with their "resolution." The "comforting" part then comes: that in the event of the guardians dismissing me I shall be entitled to payment for work done *up to the time of the expiration of my notice to quit*.

When it is remembered that the *vaccination officer* cannot be dismissed by the guardians a feeling of surprise creeps over me.

I am, Sirs, yours faithfully,
Feb. 8th, 1899. X.

"THE EXPERIENCES OF A PUBLIC VACCINATOR."

To the Editors of THE LANCET.

SIRS,—I am with many of my fellow public vaccinators quite able to confirm the statement of your correspondent as to the large amount of work and the small profit attendant on that work undertaken by him in his duties under this new Vaccination Act. But what he leaves unsaid is the loss of self-respect and mental degradation incurred in performing these duties. It is bad enough in the slums where one hears oneself announced as "a bloke as wants to vaccinate the babby" and a dirty slut, called the lady, comes down and declines one's offer in choice slang meant to be as offensive as can be produced; it is still worse at the villa where the maid leaves one on the steps while she puts the chain up and goes to consult her missus. After hearing interjections such as "The idea!" "What next!" the girl returns with "Please missus says she isn't at home; she doesn't intend to have it done at all, and it shall be done by her own doctor." In the cloud of one's mind caused by all these contradictions one finds oneself outside and to seek the interior of one's brougham to carry one to fresh insults. Two contiguous houses were of one mind not to open the door to me, and though I could feel the vibration of people moving about and my coachman could see the inmates through the glass above the door ascending and descending no response was made to my four visits on four separate weeks, and the only effect obtained was to produce merriment in the neighbours who looked and grinned at their windows. Cannot a new *modus vivendi et operandi* be agreed upon? Cannot the vaccination officer first obtain consent of these people and then carry the names of these consenting ones to the public vaccinator and so spare him so much fruitless toil, or cannot vaccination

stations be restored where he may only meet those who wish for his services? This present domiciliary work cannot continue if worked on its present lines.

I am, Sirs, yours faithfully,

Feb. 11th, 1899. "P. V."

THE NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—The press, both medical and non-medical, has welcomed with considerable cordiality the formation of this society and, as far as I am aware, nothing but goodwill has been exhibited towards it by the medical profession. It should prove a success.

Whilst sympathising deeply with the objects of the Association and wishing a happy issue to its endeavours to prevent tuberculosis of all kinds, may I be permitted to point out one or two things in connexion with it which are in my opinion open to criticism? In the first place, on looking over the list of names of the gentlemen forming the organising committee one cannot but be struck with its want of representative character and this becomes more evident when one subjects the list to more careful analysis. One finds, for example, that of the special hospitals in the metropolis for the treatment of consumption, of which there are five with about 60 physicians in their service, only one has any representation upon the said committee, by a consulting physician and a junior physician; the others are totally unrepresented. Again, of the general hospitals in London, the four largest, for example, as far as I can make out, do not contribute any names to the list. Thirdly, the provincial hospitals for consumption, such as Bournemouth, Torquay, Ventnor, and the like have only one representative; Edinburgh and Belfast none.

As a matter of curiosity I have tried to find in the Medical Directory which of the 21 members of the committee are or have been connected with special hospitals for consumption in this country but have only succeeded in the case of five or six. Do not think that I have anything whatever to say against the names on the committee except that they are to some extent unrepresentative, or yet that it is my wish to demonstrate that those who have had practical experience in *treating* consumption on a large scale are any more able to help in the *prevention* of the disease than those who are not. All I desire to indicate is that it might have been more satisfactory if the representative principle had been taken into consideration when the committee was formed. I am afraid that this cannot now be rectified, as the addition of further names would only accentuate their absence in the first instance.

The other point to which I think exception may be taken is the advertisement of the Association by detailed reports of meetings held under its auspices in the lay press. This, I think, has two disadvantages—that statements divorced from their context are often made specially prominent by the reporters or editors who, of course, cannot be expected to take much interest in medical subjects except so far as they may be readable by their clients, and that certain statements are sometimes distinctly misleading. Thus some weeks ago I saw in one of the daily papers a statement with reference to heredity as predisposing to consumption (based upon some remark of a speaker at one of the tuberculosis-prevention meetings in the country) which might prove very mischievous. Another disadvantage in connexion with such a method of pushing the interests of the society, is that it is open to the suspicion of being a bid on the part of the prominent organisers of such meetings for publicity or public favour. We are fully aware that this is not the case, but it is certainly a fact that the names of the speakers at such public meetings do "catch on" with the general public when prominently brought into notice by the daily press.

I am aware that answer might be made that it is publicity which is wanted to make the work of the Association effective and this is perfectly true. Publicity certainly for the excellent aims and objects of the association, but publicity for these alone.

I am, Sirs, yours faithfully,

Feb. 6th, 1899. AN ONLOOKER.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague Commission.—The Nature of the Evidence.—The Progress of the Epidemic.—More Curative Serum.

AT the second sitting of the Plague Commission at Lahore Captain Wilkinson was examined. He cited one instance to show that clothes appeared to be the medium of infection apart from the person. In one village he recorded that the victims were rats only, whilst no human being was attacked. He knew of no positive proof that rats communicated the disease to human beings. At the last sitting Major Skinner gave evidence. He still disputed the theory that the cases in the Shropshire regiment in Barrackpore and Howrah were cases of real plague, but while he detailed certain symptoms and the results of his microscopic examinations his arguments were not conclusive.

The Plague Commission commenced to take evidence at Karachi on Jan. 23rd. Mr. Giles, the acting Commissioner for Sind, was examined and detailed the history of plague in Karachi and the measures which had been taken. He expressed his opinions on certain means by which he thought plague was spread, but no scientific evidence of these means was given. Similar opinions have been expressed at other places, but being wholly unaccompanied by any evidence of scientific value they remain merely the individual opinions of their exponents. Lieutenant-Colonel McCloghry, the civil surgeon, attributed the second outbreak to the migration of rats and to people moving from the infected to the uninfected quarters. Contagion was due more to rats than to human agency. He thought that rats generally contaminated the dwellings with their excreta. He cited a case where human agency was perfectly excluded, tending to show that contagion was entirely due to dead rats. Other witnesses, military and civilian, were also examined and their opinions were expressed in detail upon the value of disinfection and other sanitary measures. Similar evidence has been taken at other places. Why time and money are wasted in getting such evidence as this seems to me to be incomprehensible. Their opinions are only opinions and are not sufficiently supported by facts. Protests have been uttered against the examination of a hakim (a native quack doctor) upon his experiences of plague in Garhshanker. He was allowed to give his views freely on many medical questions, but his evidence was of no real value. To recognise such men—to let it be known all over the country that a scientific board of savants is apparently seeking their opinions—is to mislead the lowest and most uneducated classes of the native communities. It gives these men a status at once and therefore degrades the men who have qualified after training in the Indian universities. If qualified native practitioners were not available as witnesses hospital assistants who have had medical training might have been summoned. It is advisable to compel the hakims and vaids under pain of penalty to report all cases of infectious disease, and in the absence of a Medical Act and any system of medical registration this does not add to their status, but to accept their medical evidence is liable to misinterpretation and should be done with caution.

The mortality from all causes in Bombay city during the past week was 1449, as against 1239 in the week preceding—an increase of 210. The average weekly mortality for Bombay is about 500, so that over 900 deaths have to be accounted for. Out of this only 456 deaths from plague have been recorded and as there is no other epidemic to account for the increased mortality this shows how absurdly inaccurate the returns are. The Presidency plague returns taken on a whole are more favourable, although 343 villages still remain infected. Last week 360 were declared to be infected. Another source of confusion exists in the different dates to which the returns are compiled. The Presidency returns are made up from Friday to Friday, the local hospital reports run from Saturday to Saturday, and the municipal health officers returns go from Tuesday to Tuesday. The weekly returns are consequently all different.

Notwithstanding the great increase of deaths from plague in Bombay city inoculation is proceeding very slowly. Only 388 inoculations appear to have been done for the week ending Jan. 20th and these chiefly among low caste Hindus. Last year when the authorities could have offered inoculation in

place of detention and segregation they had a powerful means of encouraging this form of protection. Now that detention and passes have been abolished and the plague regulations do not frighten the people there is no leverage of assistance which can be given to inoculation. In Bombay large numbers of practitioners have been appointed to perform inoculation free of charge. In the Mofussil a charge of two annas was made—it then appeared a privilege—and the people flocked in thousands to be inoculated.

I understand that in addition to the supply of serum shortly to be made available from the animals which have been prepared during the past few months after the manner of Lustig there has arrived a new supply of curative serum from Paris prepared by a different process. The cases admitted into the Municipal Fever Hospital are reported to be of a very virulent type so that the present seems a particularly favourable time to test the value of any new methods. I must again caution the profession against accepting any future statistics unless they have been based on consecutive admissions to hospital.

Jan. 28th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Liverpool Northern Hospital.

DURING the year 1898 there were attended to at the Liverpool Northern Hospital 1530 in-patients and 7466 out-patients, involving 23,414 attendances. The ordinary expenditure was £7284 7*s.* 10*d.*, being a slight decrease on the expenditure of the previous year. There is a balance of £2925 2*s.* 8*d.* due to the bankers of the hospital. The receipts from all sources (including £1560 from the Hospital Sunday and Saturday Fund and £1819 16*s.* 3*d.* from subscriptions) amounted to £5528 13*s.* 11*d.* The financial condition of the charity is the subject of anxious consideration to the treasurer in view of the approaching completion of the new building, which, it is needless to say, will involve a large outlay.

Liverpool Select Vestry: the Proposed New Workhouse Hospital: Conference on Tuberculosis.

The special sub-committee appointed by the Liverpool Select Vestry to consider the plans for the proposed new hospital at Highfield reported that the estimated total cost of the building and equipment was £105,353. The price of the land was £10,000. Accommodation would be provided in the new hospital for 280 infirm poor who were now located in the attic wards of the Brownlow Hill Workhouse which had been condemned by the Local Government Board for obvious reasons. The difficulties in removing the inmates of these wards in case of fire would be very great and the subject had been a matter of friction between the Select Vestry and the Local Government Board for the last ten years. The cost worked out to £210 per bed, which does not appear to be extravagant. The three poor-law authorities comprising the Select Vestry, the West Derby Board of Guardians, and the Toxteth Board of Guardians have agreed to meet together to consider the desirability of joint action in regard to the new method of treatment of patients in the workhouse hospitals suffering from tuberculosis, of whom there are about 80 in Brownlow Hill Workhouse. West Derby has rather less and Toxteth has a still smaller number. It is hoped that through the conference some uniform arrangement will be arrived at for the treatment of tuberculosis in the incipient stage, and the prevention of infection in others.

Donations to Hospitals.

The late Mr. William Taylor of Southport has bequeathed £500 to the St. Paul's Eye Hospital, Liverpool. Mr. Samuel Smith, M.P., has given £100 to the Children's Infirmary, Liverpool, and also £100 to the New Central Hospital at Liscard, in memory of his son, Mr. James Gordon Smith, who died recently from typhoid fever.

Workmen's Compensation Act: House Surgeon's Fees.

The committee of the representatives of the Liverpool hospitals appointed to consider the question of fees for certificates given by house surgeons under the provisions of the Workmen's Compensation Act have recommended that house surgeons be entitled to charge one guinea for each report to insurance companies and employers of labour.

Treatment of Tropical Diseases.

At the annual meeting of the Royal Southern Hospital, held at the town hall on Feb. 13th, the Lord Mayor who presided said that it was one of the first obligations of the port to relieve the sufferings of patients who had contracted disease in West Africa, especially in connexion with the trade and commerce of Liverpool, and that the Royal Southern Hospital had been selected for this purpose. Mr. William Adamson (the President) afterwards stated that last year Mr. A. L. Jones, a member of the hospital committee, generously offered £350 towards the establishment of a school for the study of tropical diseases; a large ward has been appropriated for the reception of such diseases, an experienced clinical demonstrator has been appointed, and advertisements have been issued for a lecturer. The school expenses will be administered by an independent committee and from a separate fund.

Feb. 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow University.

IT has been determined to take steps to promote the establishment of a permanent memorial of the late Professor Coats and of his valued work and influence in the University. The committee which has been appointed to secure this end includes the names of the Very Reverend Principal Storey, Sir William Gairdner, K.C.B., Dr. James Finlayson, Dr. Lindsay Steven, Dr. Donald Fraser, and Dr. David Newman (honorary secretary).—At a meeting of the University Court on Feb. 9th it was announced that the late Mr. William Gardiner, M.D. Glasg., of Ashton-under-Lyne had bequeathed to the University the sum of £1000 for the purpose of founding a bursary in the Faculty of Medicine.—At the same meeting Sir William Gairdner intimated his desire to resign his position on the Board of Curators, in whom the patronage of the chair of Pathology is vested, and Professor McKendrick was appointed in his place.—The names of two more gentlemen are mentioned in connexion with the vacant assessorship of the University Court—viz., those of Sir James Bell and Mr. W. R. Copland, C.E. Sir James Bell was formerly member of the Court in virtue of his position as Lord Provost of the city and Mr. Copland has for some years been convener of the business committee of the University Council.

Aberdeen Sick Children's Hospital.

The number of cases treated in the wards of the Aberdeen Royal Hospital for Sick Children in 1898 was 889, the average duration of treatment was 32·1 days, and the average number of beds occupied daily was 80·8. The ordinary revenue was over £3572, the average annual expenditure per bed occupied was £43 2*s.* 5½*d.*, and the average daily expenditure per patient was 2*s.* 4·351*d.* The ordinary income amounted to more than £2093, and the extraordinary income (including legacies, donations to building fund, contribution from Queen's Diamond Jubilee Fund, and proceeds of bazaar) was over £4230. The special fund for the erection of a nurses' and servants' home has been closed. During the summer 48 children were received at the Eidda Convalescent Home, Culter, their stay varying from four to 20 weeks.

Typhus Fever in Aberdeen.

An outbreak of typhus fever has taken place in the Footdee district, Aberdeen, four cases having been removed to hospital during the week ended Feb. 11th. Of late years typhus fever has been almost unknown in the city.

Feb. 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal College of Physicians of Ireland and Dr. Clifford Allbutt.

AT a special meeting of the Royal College of Physicians of Ireland held on Feb. 14th, 1899, the Honorary Fellowship of the College was conferred on Dr. T. Clifford Allbutt,

Regius Professor of Physic in Cambridge University. In admitting the new Honorary Fellow the President said that in conferring upon Dr. Clifford Allbutt the highest dignity which it was in their power to bestow the Fellows felt that they were doing honour to themselves, but above all to that ancient College of which they were so proud and the prestige and good name of which they so jealously guarded.

Dublin University.

A meeting of the Senate of the University of Dublin took place on Feb. 14th in the examination hall of Trinity College, for the purpose of conferring degrees. The University Caput—consisting of Mr. Justice Madden (Vice-Chancellor), Rev. Dr. Salmon (Provost), and Mr. Cathcart (senior master non-regent)—presided. The attendance included Fellows and professors of Trinity College, other members of Senate, and a number of ladies who were accommodated with seats on the daïs. Two degrees *honoris causâ* were conferred—one on Dr. Thomas Clifford Allbutt, Regius Professor of Physic in Cambridge University, and the other on Sir Thomas Moffett, formerly President of the Queen's College, Galway.

Irish Medical Association.

The Council of the Irish Medical Association has convened a public meeting of the profession to be held by permission in the Royal College of Surgeons, Dublin, on Thursday, March 2nd, 1899, at 4 o'clock P.M., under the chairmanship of Sir Thornley Stoker, M.D. R.U.I., President of the Association, for the purpose of promoting the reform of the grievances of the Irish Poor-law Medical Service.

The Royal Victoria Eye and Ear Hospital.

The second annual general meeting of the Royal Victoria Eye and Ear Hospital took place on Feb. 14th at the Mansion House, Dublin. The Right Hon. Viscount Monck presided.

Queen's College, Belfast.

At a meeting of the corporate body of Queen's College, Belfast, held in the council chamber on Feb. 10th, for the purpose of considering the present position of the Irish University question (the president occupying the chair) the following resolutions were passed:—

1. That in our opinion the present provision for university education in Ireland is unsatisfactory.
2. That it is desirable that all candidates for university degrees should have attended complete courses of lectures at a recognised college or institution.
3. That in any re-settlement of the university system of Ireland it is essential that in this College provision should be made for the endowment of new Chairs, especially those required to meet the peculiar needs of this community, for the appointment of assistants and demonstrators, for additional laboratories, for museums of science, art, and antiquities, for more liberal additions to the library, and for facilities of research. The want of these at present seriously impairs the efficiency and lowers the status of this College as a place of learning and education.
4. That in our opinion the higher education of the North of Ireland would be admirably served by the re-establishment of the old Queen's University on its former broad non-sectarian basis, with such modifications as would meet the altered circumstances of the case, but with its seat in Belfast and with the provision of an adequate endowment.
5. We are of opinion that in the proposed new Queen's University it is essential to include Chairs of Philosophy and Modern History.
6. That copies of these resolutions be sent to his Excellency the Lord Lieutenant, the Chief Secretary, the Prime Minister, and the Leader of the House of Commons.

The importance of, and the value to be attached to, the above resolutions rest in the fact that they are the unanimous opinion of the professoriate of Queen's College, for at the meeting at which they were discussed every professor was present except two and one of these was unable to attend through indisposition. Further, they are the expression of the views of men who are all actively engaged in teaching and who thus may be regarded as experts. The question of university education is still being very fully discussed and a new turn has been given to the subject by a letter from the Roman Catholic Bishop of Down and Connor who claims that the Roman Catholics of Belfast and of the rest of his diocese must be considered in any settlement of the matter. He points out, as a conspicuous example of their generosity, that they are building at a cost of £50,000 a new hospital—the Mater Infirmorum—which when completed will afford opportunities of clinical instruction for medical students equal to those of any similar institution in the country. Accordingly the Bishop writes that "no reconstruction of the University system of education can be regarded as satisfactory or just which ignores these undoubted claims to equality in the domain of higher education." Although it is evident that there is strong opposition to Mr. Balfour's proposals it is becoming more and more clear that the present state of affairs cannot continue. The resolutions of the Queen's College professors have produced a marked effect among thinking men who naturally ask why do these authorities in educational matters who have tried patiently and faithfully to do their best under the existing *régime* declare that the present provision for university education in Ireland is unsatisfactory. The question—admittedly a difficult one—should be discussed on purely academic grounds and it is a great pity that any other element, political or sectarian, should be introduced.

The Belfast Lunatic Asylum.

From the annual report of Sir G. P. O'Farrell, the Inspector of the Board of Control, I learn that the condition of Purdysburn auxiliary asylum was quite satisfactory. Discussing the problem of how best to provide for the lunatic poor of Belfast, he recommends that provision should be made at Purdysburn for the acute and chronic classes and for the mild classes of insanity now located in the workhouse and he thinks that one portion of the estate at Purdysburn would lend itself admirably to the establishment of a colony for working epileptics. Dr. Walter Smyth has been appointed medical superintendent of County Antrim Asylum. He was formerly second assistant in the Belfast Asylum. Dr. R. A. L. Graham has been selected to fill Dr. Smyth's vacated post. There are now 994 patients on the asylum register.

The Belfast Maternity Hospital.

At the annual meeting of the subscribers of this hospital held on Feb. 7th it was reported that there were 279 intern and 166 extern patients. A committee has been appointed to make the arrangements to raise the necessary money for building a new maternity hospital and an encouraging response has already been given. The new building is to cost £1000. In the interests of the medical school and of the poor of Belfast a new maternity hospital is much needed.

Feb. 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Exhibition of 1900 and the Assistance Publique.

THE committee nominated by the Board of Trade to decide as to the admission of exhibitors in Class 112—i.e., the Assistance Publique, private charities and penitentiaries—has sent out a circular to the most important charitable bodies in France asking for their coöperation in the Exhibition of 1900. The programme drawn up by the committee groups together on the one hand charitable works of every kind, such as are both very numerous and as deal with a vast variety of subjects, and in a second group are placed those institutions concerned with penitentiary work. The Class is to be divided into five sections, as follows: (1) general exhibits, historical exhibits, and sundry legislative enactments; (2) protection of children; (3) help for adults in sickness; (4) help for the able-bodied poor, for the blind, and for deaf mutes; and (5) State pawnbroking establishments and penitentiaries. Exhibitors in Class 112 can avail themselves by special permission of the gratuitous use of sites and the administration will defray the cost of show cases, shelves, stands, and other necessaries for exhibits. The railway companies are also allowing reductions for the carriage of exhibits of 25 per cent. for the single journey and 75 per cent. for the return. By Clause 72 Section 3 of the general regulations exhibitors are invited to get together a series of historical exhibits for each section. Suggested subjects for this are the treatment of the sick in hospitals at different epochs, the care of lunatics, of the aged, of infants, together with books, papers, and drawings dealing with such matters. It will thus be seen that this portion of the Exhibition will form a most interesting temporary museum. Collectors desirous to take part in this exhibition should send in a separate application upon a special form stating plainly the description and the value put upon the objects which they lend. The administration will hold itself responsible for exhibits, but only as far as the declared value put upon them by exhibitors in accordance with the terms stated on the admission tickets.

Statistics of Paris Medical Students.

The Paris Faculty of Medicine has published a list of the number of students in medicine who gave in their names for the medical course of the past scholastic year. This is an interesting piece of information for thereby the reader is enabled to form some idea as to the effect of the recently passed university regulations as to fees and the like. It must be remembered that foreigners now only receive a doctor's degree which, although of the same scientific value as that granted to Frenchmen, yet does not permit them to practise in France unless indeed they have undergone the same preliminary examinations as Frenchmen have to pass. It was considered that this regulation would adversely affect the flow of foreign students in medicine. Their numbers, however, have not diminished. On the other hand, it is interesting to see whether the increased severity of the entrance examination has in any way diminished the rush of students into a profession at present greatly overcrowded. The result from this point of view is apparently satisfactory. In 1897 there were 5015 students entered, while in 1898 the number fell to 4495. This diminution is, however, only apparent and arises from the fact that the Faculty has struck off its roll a large number of students whose names were still on the books but who have given up trying to pass the examinations. All those who have entirely discontinued their studies for the past five years have been struck off the roll. Their numbers account exactly for the falling off mentioned above. A proof that the number of students is not falling off is given by the following figures for past years. In 1885 the Faculty examined 3856 students, 5468 in 1891, 6803 in 1893, 8346 in 1894, 8955 in 1896, 8971 in 1897, and 9429 in 1898.

The Medical Department of the Prefecture.

In accordance with a resolution of the Municipal Council passed on Dec. 28th, 1898, dealing with a scheme for the unification of the various Prefectal medical services the Prefect of the Seine has issued an order as follows for the re-organisation of such departments. Paris is divided into 11 districts, every one having its own medical man. A twelfth medical man, with the title of *médecin en chef de la préfecture*, is in charge of the whole with a salary of 6000 francs per annum. The 11 medical men under him are only paid 1200 francs per annum, but they are allowed in addition a commission on the number of visits paid or consultations held. The duties of the 11 medical men who bear the title of *médecin de la préfecture de la Seine* will be to treat patients only at their own homes or, if the patient is able, in the consulting-room. As regards municipal workmen and *octroi* officials the medical men must attend them for as long a period as may be necessary. When the regular medical man is absent through sickness or any other cause his place is to be taken by one of the *médecins adjoints* who are elected by competition. They rank according to the order of their admission and the number of vacancies which occur.

Notes on News.

M. Brouardel has been by an almost unanimous vote of the Professors and Fellows re-appointed Dean of the Paris Faculty of Medicine for a fresh period of three years.

At the meeting of the Academy of Sciences held on Jan. 30th M. Roux, the sub-director of the Pasteur Institute, was elected a titular member of the Section of Rural Economy, in succession to M. Ainé Girard, deceased. M. Roux received 41 votes, as against 14 obtained by M. Risler, the director of the Institute of Agriculture.

The buildings of the new Academy of Medicine have just been begun and the buildings of the Mont-de-Piété, which hitherto have occupied the site, have been pulled down. The plans as put forward by the architect are considered to show that the new Academy will be one of the most beautiful buildings in Paris, but it will hardly be ready by 1900.

Professor Berger, President of Section XVI. of the Exhibition, which is reserved for the class of surgical instruments, is getting together a collection of obsolete and ancient surgical instruments. He has notified various surgeons and instrument makers by circular that they are invited to send to him any examples of such instruments as maybe in their possession. Anyone sending an exhibit will receive a free admission ticket for the Exhibition.

Feb. 15th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Lupus Erythematosus.

AT a recent meeting of the Vienna Dermatological Society Professor Hans von Hebra showed some cases of Lupus Erythematosus treated by a new and simple method which he has been using for some time with highly satisfactory results. The methods of treating this disease were till now based upon a removal of the diseased tissue either by mechanical or by chemical means. The treatment adopted by Professor Hebra consists in the external application of absolute alcohol to the diseased parts of the skin. A piece of surgical wool soaked in alcohol is placed against the diseased part, avoiding any rubbing of the skin. This procedure is repeated frequently (at least 10 times) daily. The more frequent the application of this wool the better the result. It seems that the beneficial effect of this treatment is due to the action of the cold produced by the evaporation of the alcohol and by the abstraction of water from the tissues. It can be seen that the blood-vessels contract and that the inflamed parts become less red and less swollen. To increase the anti-inflammatory action of the alcohol Professor Hebra adds equal parts of sulphuric ether and spirit of peppermint. He has used this treatment with much success in six cases of lupus erythematosus (five cases of the chronic discoid type and one case of the acute aggravated type of the disease). A case of 25 years' standing improved very much under this treatment. Other medical men who have tried it have also had favourable results.

Cardiac Arrhythmia.

Professor Heitler has made some very interesting observations on the production of arrhythmia of the heart in animals. In the course of a series of experiments performed at the laboratory of Professor Basch in Vienna he observed that by pricking the pericardium of a dog with needles an arrhythmic pulse is produced. When cocaine has been used locally to make the pericardium anæsthetic the mechanical stimulation of this membrane does not produce any change in the heart-beats. In a series of recent experiments Professor Heitler obtained an arrhythmic pulse by brushing the pericardium with croton oil and with sulphuric acid. The arrhythmia so produced disappears after some time, but when the irritant has been injected into the heart-muscle an arrhythmic pulse is produced which does not disappear, because in the latter case the heart-muscle becomes paralysed. By these experiments it is shown that one of the causes of arrhythmia may be a mechanical or chemical irritation of the pericardium and that this kind of arrhythmia may disappear as soon as the irritation has ceased without causing any further disorders of the heart-beats.

Infectious Diseases in Austria.

In the opening days of this year two cases of rabies in the human subject occurred at Trieste and there is an increase in the number of cases of rabies among dogs reported from Dalmatia. Outbreaks of typhoid fever were reported last week from the two Austrian seaports, Pola and Trieste, the disease being ascribed in both towns to infected oysters. At Lieben, a suburb of Prague, 20 cases of typhus exanthemicus occurred at the police barracks with three deaths in the course of last week and two cases of the same disease were notified at Leitmeritz, a town in Northern Bohemia. It must be remarked that the sanitary conditions of Prague as well as of Pola and Trieste are far from being in accordance with modern requirements and that the water-supply in these towns is extremely bad.

Feb. 12th.

FREEMASONRY.—*The Rahere Lodge, No. 2546.*—An ordinary meeting of the Lodge was held at Frascati's Restaurant on Feb. 14th, Bro. Burns, W.M., being in the chair. Bro. Roberts was admitted to the third degree in Freemasonry. Bros. Lewis, Kennedy, and Hood were admitted to the second degree. Messrs. E. H. E. Stack and Sydney Cornish were initiated into Freemasonry. A vote of one guinea was made towards the maintenance of "Our Brother's Bed" in the Home for the Dying and Bros. Burns, Izard, and Coventon were respectively appointed stewards to each of the three Masonic charities, a sum of 10 guineas being voted to each list. The brethren afterwards dined together.

Obituary.

THOMAS COOKE, F.R.C.S. ENG., M.D. PARIS.

MR. THOMAS COOKE, the well-known anatomist, died suddenly on Feb. 9th in his fifty-eighth year. He was the only son of John Hawley Cooke and Jane Hawley, daughter of the Hon. Richard Hawley. He commenced his medical studies in Paris, taking his B.A. and B.Sc. in 1862 and his M.D. in 1870. During his career in Paris he held the appointments of house surgeon to the hospitals of Bicêtre, Ste. Eugénie, St. Louis, Lariboisière, and Le Midi. He was demonstrator in anatomy at the École Pratique de la Faculté de Médecine de Paris and was awarded the bronze medal by the Administration de l'Assistance Publique. In 1871 Mr. Cooke took the F.R.C.S. Eng. and in the same year was elected assistant surgeon at the Westminster Hospital, to fill the vacancy caused by an assistant surgeon becoming surgeon. After two more vacancies in the post of surgeon had been filled up Mr. Cooke became senior assistant surgeon. A vacancy for a surgeon occurring in 1875 Mr. Cooke became a candidate but Mr. Macnamara who had been a student of King's College and had recently returned from 20 years' service in India was appointed upon claims which were in many directions stronger. Mr. Cooke had acted as demonstrator of anatomy and when a vacancy occurred in the lectureship of anatomy in the Medical School Mr. Cooke became a candidate, but for reasons into which it would serve no purpose to enter now he was not elected. Mr. Cooke declared, and quite rightly, many years afterwards that the refusal to recognise his just claims compelled him to rely upon his own exertions and to develop his own private school, with which his name is so widely and favourably associated. There was no further vacancy for a surgeon until 1893, when Mr. Bond who was two years junior to Mr. Cooke was appointed, the latter not becoming a candidate; he never applied for any subsequent vacancy. Having served more than seven years Mr. Cooke became surgeon to out-patients. In 1887 an extra assistant surgeon was appointed to see out-patients on Mr. Cooke's days and some years later Mr. Cooke was by special resolution "relieved of all care of in-patients and out-patients." His name continued to appear on the list of the staff without any stated time for attendance.

In 1870 Mr. Cooke founded the widely known London School of Anatomy and Physiology which he conducted up to the time of his death. In the work which he had thus undertaken Mr. Cooke was animated continuously by the earnest desire to "provide students with a knowledge of anatomy derived from individual practical examination of the human body and investigations which the student can himself repeat as opposed to scientific abstractions." Ever at pains to further the progress of his students he endeared himself to them by his kindly manner and ready sympathy with their work, and his loss will be deeply felt by all who have received his valued training. Up to the actual moment of his death he devoted himself to the teaching of human anatomy in the primary sense of the term. Of that which can be seen with the naked eye by cutting up the *dead* body Mr. Cooke became and continued throughout his life the most distinguished exponent in this country. His classes were attended not by the junior students, but by those who, whether they had failed at examinations or not, had already spent the time usually allotted to anatomy at a medical school, but who had not gained the minimum amount of knowledge required. By personal influence he was able to obtain an application to the study of anatomy on the part of those who had failed to study before and to control by discipline men who had not been amenable to that applied at their own school. Both by word and by writing Mr. Cooke was a most enthusiastic advocate of anatomy as learnt by dissecting, and in certain instances individuals did more and better dissecting at his school than they had ever accomplished before, while he gave the greatest impulse to the teaching and learning of anatomy by the aid of dissections previously prepared. From the experience drawn from the class of students with which he was most familiar, he argued on more than one occasion in our columns and elsewhere against the increasing amount of morphological and embryological anatomy taught. He would concentrate the attention of students upon that irreducible minimum of anatomy which they must acquire before qualifying for medical practice. This limitation of the subject can continue to justify itself only by being strongly practical. It must be influenced throughout by the surgical and medical practice of the moment, not by that of the past. The teaching which "caused the dry bones to live" in the sixties or the seventies will not do so now unless revised and brought up to date. That irreducible minimum of anatomy which Mr. Cooke so earnestly taught is not sufficient for the practitioner unless the *living* body is constantly referred to by a surgeon engaged in the active practice of surgery. This side of the question was perhaps not quite clear to Mr. Cooke, who had his ideals and was true to them, but whether we agree with his views or not the fact remains that he was a great anatomical teacher.

Mr. Cooke's contributions to medical literature are well known. We may incidentally mention Tablets of Anatomy, Dissectional and Scientific, the latest edition of which occupied his leisure time during the last years of his life; Tablets of Physiology; Aphorisms of Applied Anatomy; Operative Surgery; Dissection Guides; A Plea for Practical Worth in Anatomy; and the Old and New Schools of Anatomy.

In 1870 Mr. Cooke married Aglaé, daughter of the late Jean François, 21st Comte de Hamel de Manin, Knight of the Royal Order of the Legion of Honour, Officer of the Household of Louis XVIII., and of Helen Marian Rhys, daughter of the late Lieutenant-Colonel John Hughes Rhys, J.P., of Killmaenlwyd Hall, and Pembrey Court, Carmarthenshire, by whom he leaves three sons (of whom one is preparing to follow his father in the medical profession) and two daughters (of whom one is a staff nurse at St. Bartholomew's Hospital). Mr. Cooke was a fervent Christian, an ardent enthusiast, and an incessant worker both in his profession and in his daily life, and had undoubtedly undermined his strength. On the morning of his death he delivered a lecture and was demonstrating in the dissecting-room when the fatal seizure took place, so that in the most literal sense he died in harness.

Medical News.

UNIVERSITY OF LONDON.—At examinations held in January the following candidates were successful in the subjects indicated:—

INTERMEDIATE EXAMINATION IN MEDICINE.

Excluding Physiology.

First Division.—Michael Abdy Collins, Guy's Hospital.

Second Division.—Albert Maurice Amsler, St. Bartholomew's Hospital; Alwyn Hewett Bradley, Mason University College; Albert Henry Bygott, Queen's College, Birmingham; William James Davies and Henry Albert Ehrlich, Guy's Hospital; Daniel Cyril Evans, University College, Cardiff; George Evans, Guy's Hospital; Edward Fow Fisher, London Hospital; Bessie Marion Gilford, Royal Free Hospital and Birkbeck Institute; Arthur Claypon Horner Gray, Guy's Hospital; Percival George Harvey, St. Bartholomew's Hospital; Bernard Watson Jones, Mason University College; William Henry Jones, London Hospital; Charles Burnage Penny, Guy's Hospital; Marie Louise Pethick, London School of Medicine and Royal Free Hospital; Herbert Harland Raw, St. Bartholomew's Hospital; Ernest Frederick Reeve and William Morton Robson, Guy's Hospital; Emily Gertrude Stuart, London School of Medicine and Royal Free Hospital; George Orissa Taylor, London Hospital; David Herbert Trail, Guy's Hospital; Arthur Beaumont Waller, London Hospital; Winefred F. Wigglesworth, London School of Medicine and Royal Free Hospital; and Alfred Ernest Freear Wilkes, Queen's Faculty of Medicine, Birmingham.

Physiology only.

First Division.—Hans Frederick William Boeddicker, Mason University College; Adrian Caddy, St. George's Hospital; David Ellis, London Hospital; Ambrose Hilton John, Robert Archer Lloyd, and Ernest Charles Mackay, St. Bartholomew's Hospital; Annie Mooney, London School of Medicine for Women; Sidney James Ormond, Arthur Pearson, and Alan Carpmael Ransford, Guy's Hospital; and Arthur Stanley Woodwark, St. Bartholomew's Hospital.

Second Division.—James Connor Maxwell Bailey, St. Bartholomew's Hospital; Edward Walter Bain, London Hospital; Herbert Cecil Barlow, Westminster Hospital; Francis Joseph Birks, University College, Sheffield; Norman Carpmael, St. Thomas's Hospital; Francis Gerrard H. Cooke, Cooke's London School of Anatomy; David Forsyth, Guy's Hospital; John Stansfield Gayner and Sydney Balch Green, St. Bartholomew's Hospital; Arthur Charles Haslam, St. Thomas's Hospital; Ernest Thomas Jensen, Oswald Marriott, and Thomas Arnold Matthews, Guy's Hospital; William Panckridge Panckridge, Middlesex Hospital; Allan Chilcott Parsons, St. Thomas's Hospita and King's College; Morgan James

Rees, Guy's Hospital; Charles Haldane Denny Robbs and James John Sheat Scrase, St. Bartholomew's Hospital; Douglas Wilberforce Smith, Edinburgh University and Guy's Hospital; James Henry Stormont, Mason University College; and Frederick George Thompson and William Arthur Trumper, St. Mary's Hospital.

PRELIMINARY SCIENTIFIC EXAMINATION.

Entire Examination.

First Division.—David Isaacs, University Tutorial College.

Second Division.—Ralph Annesley Fuller, Merchant Venturers' College, Clifton Laboratory, and private study; and George Francis Jones, University College and private study.

Chemistry and Experimental Physics.

†William Bain, private study and Middlesex Hospital; William Henry Barnett, Cranleigh School and University Tutorial College; †Helen Chambers, Newnham College, Cambridge, and private study; †Arthur James Edmonds, Owens College; †Olive Muriel Elgood, Birkbeck Institution; †Kate Knowles, University College, Nottingham, and University Tutorial College; †Cecil Lionel Lakin, Charing-cross Hospital; †Anthony Richard Neligan, St. Bartholomew's Hospital and private tuition; †William Percy Walker, London Hospital; and †Arthur Denham White, St. Bartholomew's Hospital and private study.

Biology.

†Henry Howarth Bashford, London Hospital; †Alice Marian Benham, University Tutorial College; Leonard Christopher Blackstone, University and University Tutorial Colleges; George Percival Charles Claridge, St. Mary's Hospital; †William Brown Clark, King's College; †Herbert D. Clementi-Smith, St. Paul's School and private tuition; †Helen Mary Collen, University Tutorial College and private study; †Cecil Colmer, London Hospital; Isaac Reginald Cook, University Tutorial College; Robert Higham Cooper, Charing-cross Hospital; †Albert William Duncan Coventon, Trinity College, Cambridge; †David Morgan Davies, University College, Aberystwith, and Charing-cross Hospital; †Percy Albert Stanley Dyson, Guy's Hospital; Armin Gascoigne V. Elder, St. George's Hospital; Aubrey Geo. Clifton Findlay, University College; †Peter Gifford Foulkes, Middlesex Hospital and Birkbeck Institute; Alexander Harold Gifford, King's College; †Arther Herbert Gregson, Owens College; Edward Coomber Hobbs, Alwyne Institute; †Alfred Bakewell Howitt, Epsom College; Herbert Vawser Humphry, University College and private tuition; †Catherine Mary Ironside, University Tutorial College; †John Jones, Owens College; †Charles Hugh Lathom, St. Thomas's Hospital and University Tutorial College; George Laurence, University College, Liverpool; Marcus Antonius J. Lavis, Epsom and University Tutorial Colleges and Alwyne Institute; John Tryweryn Lloydd, University College, Liverpool; †Oswald Edward Lord, St. Bartholomew's Hospital; †Lytton Pelham Maitland, the Polytechnic, Regent-street; George Ernest Peachell, St. Mary's Hospital; †Percy Alfred Peall, Guy's Hospital; Oscar Phillips Napier Pearn, University College, Aberystwith, and University Tutorial College; †Stephen Hugh Pitcairn and †Geoffrey Price, St. Thomas's Hospital and University Tutorial College; †Griffith Henry Rees, Camberwell Grammar School and Guy's Hospital; †Charles Michael Roberts, St. Paul's School and St. Thomas's Hospital; Henry Charles Samuel, University College, Cardiff, and University Tutorial College; †Henry Thomas Samuel, Kingsholme School, Weston-super-Mare; †Frederick William Weeks Smith, St. Thomas's Hospital and University Tutorial College; †Annie Broomhall Thin, University Tutorial College; Ernest Frank Travers, St. Bartholomew's Hospital; †Francis Henry Whitehead, St. Thomas's Hospital; †Lorton Alexander Wilson, Owens College; and †Edwin Robert Wheeler, Monkton Combe School and King's College.

† These candidates have now completel the examination.

[N.B.—The foregoing list, published for the convenience of candidates, is provisional only and is not final until the reports of the examiners shall have been confirmed by the Senate.]

CONJOINT EXAMINATIONS BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND.—The following gentlemen have passed the examination for the diploma in State Medicine and Public Health:—

Honours Division (in order of merit).—Lieutenant-Colonel W. P. Carson, I.M.S., and J. O. Littlewood, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A.

Pass Division.—E. G. Fenton, F.R.C.S., L.R.C.P. Irel.

FOREIGN UNIVERSITY INTELLIGENCE.—*Cracow:* Dr. Michael von Senkowski has been recognised as *privat-docent* of Forensic Chemistry.—*Leipsic:* the medical clinic will shortly celebrate the centenary of its establishment. Marble statues of Professor Wunderlich and Professor E. Wagner will be erected in the gardens of the St. Jacobs Hospital. Dr. Georg Köster has been recognised as *privat-docent* of Internal Medicine. Dr. Hans Held of the Anatomical Institute has been appointed Extraordinary Professor.—*Prague (German University):* Dr. Ludwig Knapp has been recognised as *privat-docent* of Gynæcology.—*San Francisco (Cooper Medical College):* Dr. W. Fitch-Cheney has been appointed to the chair of Medicine and Dr. Rixford and Dr. Stillmann have been appointed Professors of Surgery.

ABERYSTWITH INFIRMARY.—The annual meeting of this institution was held on Feb. 4th under the presidency of Mr. J. G. Bonsall. The report showed that the in-patients numbered 191 and that 1643 out-patients were treated. The financial statement was satisfactory.

BRISTOL MEDICAL DRAMATIC CLUB.—The members of the Bristol Medical Dramatic Club celebrated their twenty-second anniversary by giving performances of Pinero's comedy *Dandy Dick* at All Saints' Hall, Clifton, on the evenings of Feb. 7th, 8th, 9th, and 10th. The entertainment was in aid of the Bristol medical charities.

HEALTH OF BATH.—At the meeting of the Bath Sanitary Committee held on Feb. 7th Dr. W. H. Symons, the medical officer of health, reported that the death-rate of Bath for 1898 was 16·3 per 1000. The zymotic death-rate was 1·43 per 1000. The deaths under one year per 1000 births were 136, compared with 161 in England and Wales.

CLIFTON DISPENSARY.—The annual meeting of this institution was held on Feb. 7th under the presidency of Canon Wallace. The report stated that 3661 patients had been treated during 1898, being a decrease of 400 as compared with the preceding year. The income of the dispensary amounted to £753 and there was a favourable balance of £199.

DIPHTHERIA AT ABERDARE.—At the meeting of the Aberdare Urban District Council held on Feb. 10th the medical officer of health (Mr. David Davies) stated that during the preceding two weeks there had been 143 cases of diphtheria, being an increase of 37 on the previous fortnight, and that 9 deaths had occurred from the disease. Mr. Davies recommended that all the schools should be closed for a month.

TWO PLUCKY MEDICAL MEN.—On Feb. 8th a fire broke out at the Aberdeen Lunatic Asylum. All the patients were with some difficulty removed to a place of safety with the exception of one, a woman, who endeavoured to escape by a barred window. She thrust her head and shoulders through the bars and then found that she could neither go forwards nor backwards. The two medical officers seeing her danger procured a ladder and put it to the window. Dr. W. R. Matthews mounted it while Dr. D. R. Moir held it steady as it gave way. Dr. Matthews reached the window and although the bars were very hot succeeded in wrenching them out, so being enabled to pull the woman through with her hair and clothes on fire. Dr. Matthews's hands were burned by the hot iron.

UNIVERSITY OF CAMBRIDGE.—Dr. G. Sims Woodhead, Director of the Laboratories of the Royal Colleges in London, has been elected to the Professorship of Pathology, vacant by the death of Dr. Kanthack. Mr. J. Stanley Gardiner, M.A., Fellow of Caius College, has been elected Balfour Student in Zoology. Grants from the fund have been made to Mr. J. S. Budgett and Mr. L. A. Borradaile in aid of their zoological researches. Mr. P. T. Main, St. John's, has been appointed an Elector to the chair of Chemistry, Professor Liveing an Elector to the chairs of Physics and of Anatomy, Dr. Vines an Elector to the chair of Botany, Dr. Allbutt an Elector to the Downing chair of Medicine, Dr. A. Macalister an Elector to the chairs of Zoology and of Physiology, Dr. L. Humphry an Elector to the chair of Surgery, Dr. Bradbury an Elector to the chair of Pathology, and Professor Foster an Elector to the chair of Mental Philosophy. Mr. H. E. Durham has been appointed a member of the State Medicine Syndicate. Dr. Ruhemann has been appointed an Examiner in Pharmaceutical Chemistry.

CREDITON BOARD OF GUARDIANS AND MIDWIFERY FEES.—At the Crediton County-court on Feb. 9th Mr. C. H. Haycroft, M.R.C.S. Eng., L.S.A., of Bow, sued the Crediton Board of Guardians for a midwifery fee of half a guinea. Evidence showed that Mr. Haycroft who is a district medical officer of the board on Sept. 14th last received an order from the overseer to attend a woman in her confinement. The solicitor who represented the guardians contended that as the husband was not destitute the board was not liable; the overseer or the husband, he added, might be. His Honour Judge Woodfall in giving judgment for Mr. Haycroft stated that it would be putting on a medical officer an intolerable burden if he had to ascertain the circumstances in which the people were living and had to pause before giving his attendance and institute a cross-examination or some other mode of inquiry to see if the people were destitute. His Honour added that he did not think the Poor-law Act meant that kind of medical relief to be administered in any such grinding spirit. The medical officer was bound to obey the

order and there was no duty on him to inquire into the more or less degree of destitution of the patients. The judge granted the guardians leave to appeal.

A MEDICAL MAN KILLED THROUGH A CARRIAGE ACCIDENT.—Mr. Hudson Hairsine, L.R.C.P. Irel., of Sungate, Hook-road, Hook, while driving on Saturday, Feb. 4th, with a friend, was thrown out of the carriage at the foot of Richmond-hill through the stumbling of the horse. Mr. Hairsine died within a few hours of the accident.

HYGIENE ON THE STAGE. — Covent-garden Theatre is to be taken over entirely by the Grand Opera Syndicate and with the new management there will be, it is stated, considerable improvement in matters architectural, technical, and sanitary under the direction of Mr. Edwin O. Sachs. The electric light will take the place of gas and the sanitary arrangements will be thoroughly overhauled. It is to be hoped that the matter of ventilation of the theatre will be dealt with at once.

PRESENTATIONS TO MEDICAL MEN.—Mr. Angus E. Kennedy, L.R.C.P. Lond., M.R.C.S. Eng., of Balaam-street, Plaistow, has been the recipient of a gold-headed walking-stick from the members of the Thames Ironworks Ambulance Corps as a token of appreciation of his services from the first day of the existence of the corps.—Mr. J. McDonald, M.B. Aberd., of Kildrummy, on the conclusion on Jan. 28th of a course of instruction in ambulance aid was presented with a silver-mounted walking-stick and silver vesta box. The presentation was made on behalf of the class by the Hon. Mrs. Forbes.—Mr. A. C. Duffey, M.D. Dub., late house surgeon to the City of Dublin Hospital, on the occasion of his leaving the hospital, was presented by the medical and surgical staff, the resident students and ex-students, and the nursing staff with an operation case and a smoker's cabinet.—The distribution of certificates to the successful candidates of the St. Ives, Cornwall, ambulance class in connexion with the County Council Technical Instruction Committee took place at the public hall, St. Ives, on Feb. 10th. Afterwards the members of the class presented to Mr. John Michael Nicholls, L.R.C.P. Lond., M.R.C.S. Eng., J.P., a silver-mounted meerschaum pipe and a silver matchbox as a mark of appreciation of his services as instructor of the class.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

University Degrees Bill.

THIS Bill has been introduced again in the House of Commons. It is backed among others by Sir William Priestley and Dr. Farquharson.

Proposed Repeal of the New Vaccination Act.

Since the opening of the session several petitions have been presented in the House of Commons for the repeal of the Vaccination Act of last year and one or two for the repeal merely of Section 2 of the Act.

London Water Question.

The scope and intention of the Government measure on this subject to be introduced by the President of the Local Government Board may be gathered from its short title, which is "a Bill to enable and require the Metropolitan Water Companies to supply each other with water in cases of emergency."

The Midwives Bill.

The Bill to Promote the Better Training of Women as Midwives and to Regulate their Practice was introduced in the House of Commons on Feb. 10th, by Mr. J. B. Balfour, Lord Advocate for Scotland in the last Administration, and was formally read a first time. The names on the back of the Bill are those of Mr. J. B. Balfour, Mr. de Tatton Egerton, Mr. Schwann, Mr. Heywood Johnstone, Mr. Hazell, Mr. Bonsor, Mr. Tennant, and Mr. Skewes-Cox. The second reading has been put down for Wednesday, April 12th, but on that date there are two measures in front of the Midwives Bill—namely, the Fire Brigades Bill and a Bill for the reinstatement of certain evicted Irish tenants, and it is more than probable that these two measures will occupy the entire sitting to the exclusion of Mr. Balfour's Bill.

The Conscientious Objector.

It is the intention of Mr. Boulnois, the member for East Marylebone, to introduce a Bill to repeal Section 2 (the conscientious objector section) of the Vaccination Act of last year.

HOUSE OF COMMONS.

THURSDAY, FEB. 9TH.

The Vaccination Question.

On the motion of Mr. BARTLEY there was ordered a return of the number of certificates of conscientious objection given under Section 2 of the Vaccination Act, 1898, and received by the vaccination officers on or before Dec. 31st, 1898, and of the number of children to whom such certificates relate, the numbers to be given in respect of each Poor-law union and union county in England and Wales.

Mr. JOHNSON-FERGUSON asked the Home Secretary whether his attention had been drawn to the difference in the fees charged by benches of magistrates for certificates of exemption under the Vaccination Act, 1898, and to the fact that in some districts the magistrates had put the applicants to additional expense by insisting on the production of a certificate of birth of each child in respect of whom a certificate of exemption was applied for; and whether he would take steps to secure uniformity of action and the granting of the certificates of exemption at the least possible expense to the applicant.—Sir MATTHEW WHITE RIDLEY replied: I am aware that the fees charged for certificates of exemption under the Vaccination Act, 1898, vary in different places. The reason is that these fees are not fixed specifically for vaccination cases, but follow the charges for certificates of all kinds settled in general tables of Court fees. These tables are prepared by various local authorities and sent to the Secretary of State for approval and I have no power to enforce absolute uniformity, though in the model table of fees drawn up in my office for the guidance of the local authorities I have inserted a small inclusive charge for the certificates in question. I may add that some local authorities have applied to me for sanction to a reduction of fees fixed in former times and that I have in every case complied with their request. It is, I believe, the case that some magistrates require applicants to produce the birth certificates of their children and I am advised that this action is within their discretion.

Mr. BARTLEY addressed the following question to the First Lord of the Treasury: Whether his attention had been drawn to the largely increasing number of children who are not now protected from small-pox by vaccination and whether he proposed to take any action in the matter this session in the interests of the health of the country and especially to prevent a spread of small-pox by the increasing number of unvaccinated children in elementary schools. Mr. CHAPLIN said: My right hon. friend has asked me to answer this question, but there are no returns or information to warrant the assumption which apparently underlies it—that under the Act of last year the number of children not protected by vaccination is largely increasing. What is shown by such returns as are in the possession of the Local Government Board is as follows: beginning with 1885, so as to take account of all children who, being under 14 years of age, fall within the provisions of the Vaccination Acts, it appears that of the children born the total number remaining unvaccinated has been steadily increasing year by year from 136,000 in 1885 to an estimated number of 370,000 in 1898. Over 12,500,000 births were registered during that period and the total number of children not vaccinated reached 3,235,000. Out of this last number certificates of conscientious objection were only granted in respect of less than 239,000 children up to the end of last year. On the other hand, I may mention that since Jan. 1st, when the Act came into full operation, the demands on the Local Government Board for the new glycerinated calf lymph have been so great that a large increase in the staff engaged in its production and distribution has become necessary. That, I think, may be regarded as a satisfactory indication which gives some ground for the hope that vaccination is now on the increase as compared with recent years. But as the Act only came into full operation six weeks ago I have not sufficient information to enable me to form any confident opinion as to its working or to justify any proposal for a modification in the vaccination law during the present session as suggested by my hon. friend.

Mr. COGHILL asked whether, in view of the farce to which the Vaccination Act of last session had been reduced, the President of the Local Government Board would take the earliest opportunity of repealing Section 2 of the Act.—Mr. CHAPLIN made no reply to this question.

Tuberculosis in Milk.

Mr. CHANNING asked the President of the Local Government Board (1) whether he had now come to a decision as to the portions of the recommendations of the Commission on Tuberculosis which could and ought to be carried out without delay, and especially as to the recommendations made to secure the purity and wholesomeness of milk; (2) whether he was aware that a considerable number of town councils and other local authorities were bringing in Bills to extend their own powers locally to deal with the purity of milk and to restrain the sale of milk from diseased cows; (3) whether he had considered the resolutions passed by the British Dairy Farmers' Association and by the Central and Associated Chambers of Agriculture on this subject, to the effect that there should be a general Act passed dealing uniformly with this question; and (4) whether he would introduce a general Bill to secure better protection of the consumers from tuberculosis infection in milk throughout the country.—Mr. CHAPLIN said: The answer to the first paragraph, so far as it relates to matters affecting the Local Government Board, is in the affirmative. The answer to the second and third paragraphs is also in the affirmative. With regard to the fourth, I doubt if a general Bill is required to secure better protection to consumers from tuberculosis infection of milk. For that purpose I have prepared and I propose to issue directly an order extending the definition of "disease" in the Dairies, Cowsheds, and Milkshops Order of 1885 so as to include in the case of a cow such disease of the udder as shall be certified by a veterinary surgeon to be tuberculous. This will have the effect of prohibiting the milk from such cows from being mixed with other milk and from being sold or used for human food. Upon various other matters dealt with in the report of the Commission and affecting the question of public health—which I think may be met by regulations—I am sending a circular to the local authorities.—Mr. JEFFREYS asked the right hon. gentleman whether he had considered the probability of tuberculosis being introduced by foreign milk.—Mr. CHAPLIN replied in the affirmative.

FRIDAY, FEB. 10TH.

The Vaccination Question.

Sir JOHN GORST, Vice-President of the Committee of Council on Education, said, in reply to Mr. BARTLEY, that Article 35 of the Code

requiring all candidates for pupil teacherships to be vaccinated had been carried out in all cases since the passing of the Vaccination Act of last session.—In reply to the same gentleman Mr. GEORGE WYNDHAM, Under-Secretary for War, said that no man was enlisted in the army unless he consented to be vaccinated and Mr. GOSCHEN, First Lord of the Admiralty, said that in the navy vaccination continued to be enforced in accordance with the Queen's regulations.—Mr. JOHNSON-FERGUSON asked the Home Secretary whether he could state the inclusive fee which he had recommended should be charged by benches of magistrates for a certificate of exemption under the new Act.—Sir MATTHEW WHITE RIDLEY said: The inclusive fee which I have placed in the model table for the guidance of local authorities is 1s. 6d. I am advised further that magistrates have power to remit or reduce in suitable cases any fee fixed by a table for general use in their court.—Mr. COGHILL asked the First Lord of the Treasury whether the Government would take an early opportunity of repealing Section 2 of the Vaccination Act of last session and whether it was the intention of the Government to introduce the Revaccination Bill which was promised last session.—Mr. BALFOUR said: It is not the intention of the Government to bring in any vaccination legislation in the course of the present session.

MONDAY, FEB. 13TH.

The Pharmacy Acts in Ireland.

Dr. TANNER asked the Chief Secretary to the Lord Lieutenant of Ireland whether he was aware that persons convicted of offences under the Pharmacy Acts can and have placed themselves outside these Acts through their incorporation under the Companies Acts and whether companies can be registered to do acts for which qualification by education and examination is required by Parliament; and whether the Government would take into account and remedy these grievances complained of by the Pharmaceutical Society of Ireland.—Mr. GERALD BALFOUR replied that the matters complained of formed the subject last year of a correspondence between the Pharmaceutical Society of Ireland and the Select Committee of the House of Lords on the Companies Acts Amendment Bill. The subject appeared to be one calling for consideration when any amendment of the law was proposed affecting Great Britain and Ireland as a whole.

TUESDAY, FEB. 14TH.

Tuberculosis Commission.

In the ballot for places on this day four weeks the first place was drawn by Mr. CHANNING who gave notice that on the day in question he will call attention to the report of the Royal Commission on Tuberculosis and move a resolution on the subject.

The Vaccination Question.

Mr. BARTLEY asked the Secretary of State for India whether in dealing with the suppression of the plague in India the conscientious objector who on conscientious or religious grounds objects to the action of the sanitary authorities in attempting to stamp out the disease is allowed to be exempted in the same way as the conscientious objector to vaccination is in this country.—Lord GEORGE HAMILTON replied: In dealing with the plague in India all possible respect is shown to the religious or conscientious scruples of the natives. My honourable friend is no doubt aware that inoculation against the plague is not compulsory, though very large and increasing numbers of natives have availed and are availing themselves of its benefits.—Mr. BARTLEY: Do I understand, then, that the conscientious objector is not recognised in India?—Lord GEORGE HAMILTON: I did not say that. My reply must be gathered from the four corners of my answer.

The Imperial Institute and the London University.

Mr. HOGAN asked the Secretary of State for the Colonies whether a scheme for the utilisation of a portion of the Imperial Institute buildings for the purposes of a new Imperial University had been brought under his notice; and whether the scheme would be submitted for the approval of the Colonial Governments concerned before definite action is taken.—Mr. CHAMBERLAIN replied: I believe that a conference of representatives of the Government, the Imperial Institute, and the London University will shortly take place to consider whether a part of the Institute buildings can with due regard to all existing interests be made available for the accommodation of the London University as reconstituted by the Act of last session. Until the result of the deliberations of the conference is known it would be premature to consider what, if any, further steps should be taken in the matter.

London Water-supply.

Mr. HARRY SAMUEL formally introduced a Bill "to amend the Metropolis Water Act, 1871, and to make further provision for the due supply of water to the metropolis."

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ADDINSELL, A. W., M.B., C.M., has been appointed Pathologist to the Chelsea Hospital for Women, Fulham-road, London, S.W.

ARNOLD, E. G. E., M.B., B.S. Durh., M.R.C.P. Lond., M.R.C.S., has been appointed Senior Medical Officer to the Tonteeth Workhouse.

AYRES, G. H., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer and Public Vaccinator to the Tarporley Sanitary District of the Tarvin Union, vice A. McCulloch.

BATES, H. B., L.S.A., has been appointed by the Lords of the Admiralty Examining Surgeon to the Royal Navy for the St. Helen's District.

BOOTH, J., M.B., B.Ch. Irel., has been re-appointed House Surgeon to the South Charitable Infirmary and County Hospital, Cork.

BUTLER, W. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Second Sanitary District of the Flaxton Out-relief Union.

COLE, T. W., M.B., B.Ch. Dubl., has been re-appointed Medical Officer of Health by the Bolsover Urban District Council.

COWELL, A. R., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed, *pro tem.*, Medical Officer to the Eastern portion of the Parish of Hampstead, vice A. Murray, deceased.

DUNCAN, A., M.B., D.P.H., has been appointed Clinical Assistant to the Chelsea Hospital for Women, Fulham-road, London, S.W.

DUNCAN, CECIL C., has been appointed Analyst to the City of Worcester.

GLASSON, C. J., M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Third Sanitary District of the Romford Union.

HEATEN, JOHN C., M.R.C.S., L.R.C.P. Lond., L.S.A., D.P.H. Eng., has been re-appointed Medical Officer of Health by the Keynsham Rural District Council.

HERBERT, B. H., M.R.C.S., has been re-appointed Medical Officer of Health by the Sudbury Rural District Council, Staffs.

HIBBERD, E., M.D. St. And., M.R.C.S., has been appointed Medical Officer to the Casual Wards of the Parish of Paddington.

JENKINS, G. H., L.R.C.P., L.R.C.S. Edin., F.F.P.S. Glasg., has been re-appointed Medical Officer by the Pontypool Rural District Council.

KNOX, J. E., M.B., C.M. Edin., has been appointed Medical Officer of Health by the East and West Molesey Urban District Council, vice J. J. Knox, deceased.

MARSHALL, C. DEVEREUX, F.R.C.S. Eng., has been appointed Ophthalmic Surgeon to the Victoria Hospital for Sick Children, Chelsea.

MURRAY, JOHN, M.B., F.R.C.S., has been appointed Surgeon to Outpatients to the Paddington-green Children's Hospital, London, W.

NARIMAN, B. K., M.B., B.Sc. (Public Health), E.M. Edin., has been appointed Assistant Surgeon to the South Dispensary, Liverpool.

NORGATE, R. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Stapleton Workhouse.

OGILVY, ALEC, M.D., F.R.C.S.I., has been appointed Surgeon to the Bristol Eye Dispensary.

PEIRCE, J. E., M.R.C.S., has been appointed Medical Officer to the Beoley Sanitary District of the King's Norton Union.

PRATT, J. W., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Wiveliscombe Urban District Council.

ROWLAND, H. A., M.B., C.M. Ed., has been appointed Medical Officer to the Seventh Sanitary District of the Ashton-under-Lyne Union.

SAUNDERS, W. SEDGWICK, M.D. Castleton, U.S., L.R.C.P. Edin., M.R.C.S., has been appointed Consulting Medical Adviser to the Equitable Life Assurance Society (of the United States), Prince's-street, Bank, London, E.C.

STONE, FREDERICK W. S., L.R.C.P. & S. Irel., has been appointed Public Vaccinator to the Bitton District by the Warmley Guardians and District Council.

TURNER, C. R., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Royal Bucks Hospital, Aylesbury.

WARREN, JOHN, has been appointed Medical Director to the Equitable Life Assurance Society (of the United States), London Office, Princes-street, Bank, E.C., vice W. S. Saunders, retired.

WOODHEAD, G. SIMS, M.D., F.R.C.P. Edin., has been appointed Professor of Pathology at the Cambridge University, vice Professor Kanthack, deceased.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM TAME AND REA DISTRICT DRAINAGE BOARD.—Analytical Chemist. Commencing salary £135 per annum, rising to £165 per annum. Applications to Mr. J. Knight, Offices of the Drainage Board, Council House, Birmingham.

BRIGHTON THROAT AND EAR HOSPITAL, Church-street, Queen's-road.—Non-resident House Surgeon for six months. Salary at the rate of £75 per annum. Applications to the Secretary, 10, Black Lion-street, Brighton.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

COLONIAL OFFICE, London.—Medical Officers for temporary service on the Gold Coast, for one year. Unmarried. Salary at the rate of £350 a year, with quarters, or an allowance in lieu thereof. Also Medical Officers for the West African Frontier Force on the Niger. Apply personally to the Assistant Private Secretary at the Colonial Office.

COTTAGE HOSPITAL, North Ormesby, Middlesbro'.—Assistant, in-door, unmarried. Salary £8 per month.

COUNTY HOSPITAL, RYDE.—House Surgeon. Salary £50 per annum, with board, lodging, &c.

DALRYMPLE HOME FOR INEBRIATES, Rickmansworth. — Resident Medical Superintendent, married. Salary £200 per annum, unfurnished house, food, coals, gas, &c., provided.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—House Surgeon. Board, residence, &c., provided and an honorarium of £25 granted conditionally.

ESSEX COUNTY ASYLUM, Brentwood.—Junior Medical Assistant Officer, unmarried. Salary £120 per annum, with board, residence, and washing. Applications to the Medical Superintendent.

FARRINGDON GENERAL DISPENSARY, 17, Bartlett's-buildings, Holborn circus, London.—Resident Medical Officer. Salary £100 per annum, with apartments and attendance.

HALIFAX UNION WORKHOUSE—ST. LUKE'S HOSPITAL.—Assistant Medical Officer, unmarried. Salary, £160 per annum, subject to statutory deductions. Applications to the Clerk to the Guardians, Union Offices, Halifax.

HEREFORD GENERAL INFIRMARY.—Senior House Surgeon, unmarried. Salary £90 per annum, with furnished rooms, board, washing, gas, coals, and attendance.

HERTFORDSHIRE COUNTY ASYLUM, Hill End, St. Albans.—Assistant Medical Officer, unmarried. Salary £130 per annum for the first year, rising to £150 per annum after one year's service, with furnished quarters, board, washing, and attendance.

HUDDERSFIELD INFIRMARY.—Assistant House Surgeon for six months. Salary at the rate of £60 per annum, with board, lodging, and washing.

LEEDS UNION.—Assistant Medical Officer for the Workhouse, Schools, and Infirmary, situate in Beckett-street, Leeds; unmarried. Salary £100 per annum, with board, washing, apartments, and attendance. Subject to statutory deduction. Applications to the Clerk, Poor-law Offices, East Parade, Leeds.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer for six months, unmarried. Salary at the rate of £80 a year, with board and lodging. Applications to the Secretary, Dispensary, Gartside-street, Manchester.

MANCHESTER EAR HOSPITAL, 23, Byrom-street.—Clinical Clerkship for a Senior Student for six months. Honorarium 10 guineas.

NORFOLK AND NORWICH HOSPITAL, Norwich.—House Surgeon for two years, unmarried. Salary £80 per annum, with board, lodging, and washing.

PETERBOROUGH INFIRMARY AND DISPENSARY.—Assistant Physician and Assistant Surgeon.

PRESTON ROYAL INFIRMARY.—A Junior and an Assistant Surgeon. Salaries £80 and £50 per annum respectively with board, lodging, washing, &c.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL HALIFAX INFIRMARY.—Assistant House Surgeon, unmarried. Salary £50 per annum, with an extra allowance of £9 2s. 6d. per annum; also residence, board, and lodging.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Junior Out-patient Surgical Officer. Salary £50.

SALFORD ROYAL HOSPITAL.—House Surgeon for twelve months. Salary £100 per annum, with board and residence.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone-road, London, N.W.—Anæsthetist. Honorarium, £20 per annum.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House Surgeon. Salary £100, with board and residence.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Salary £30 per annum, with board, lodging, and washing.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Assistant House Surgeon, for six months. Board, lodging in the hospital, and washing provided.

UNIVERSITY COLLEGE, Sheffield.—Demonstrator in the Bacteriology Laboratory. Salary £150.

UNIVERSITY OF GLASGOW.—Chair of Pathology. The normal salary of the Chair is fixed by Ordinance at £1100.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—House Physician, for six months. An honorarium at the rate of £50 per annum given, and board and lodging in the hospital provided.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £60 per annum, with board and residence in the hospital.

WINDSOR ROYAL INFIRMARY.—House Surgeon, unmarried. Salary commencing at £100 per annum, with residence, board, and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE HOSPITAL, Wolverhampton.—Assistant House Surgeon, for six months. An honorarium at the rate of £50 per annum given at the end of that term. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

GUILDING.—On Feb. 8th, at Worcester House, Reading, the wife of Lansdowne Murray Guilding, M.B., of a son.

HALDANE.—On Feb. 13th, at Viewforth, Bridge of Allan, N.B., the wife of William Haldane, M.D., F.R.C.P., of a son.

MACMILLAN.—On Feb. 8th, at Monsall Lodge, Prestwich, Lancashire, the wife of David Macmillan, M.D., of a daughter.

SAYRES.—On Feb. 12th, at Woodford, Essex, the wife of A. W. F. Sayres, M.D., of a son.

MARRIAGES.

SHAW—SCHMOCKER.—On Jan. 25th, at the St. Marylebone Registrar's Office, privately, John Shaw, M.D. Lond., M.R.C.P. Lond., of 32, New Cavendish-street, Cavendish-square, W., to Rosa Schmocker of Ringgenberg, near Interlaken, Switzerland.

WOODS—CHALONER-SMITH.—On Feb. 11th, at St. Bartholomew's Church, Dublin, Hugh Woods, M.D., of Highgate, to Tempe, elder surviving daughter of the late John Chaloner-Smith, C.E., of St. Helen's, Bray, co. Wicklow.

WOODYATT—ROWCROFT.—On Feb. 9th, John F. Woodyatt, M.R.C.S., L.R.C.P., of Halifax, Yorkshire, to Violet Isabel, youngest daughter of Major-General G. C. Rowcroft, I.S.C., of Hampden Mount, Caterham Valley.

DEATHS.

CLARKE.—On Jan. 20th, at Bream Down, Morley, Georgina, the beloved wife of Arthur Clarke, L.R.C.P. Lond., M.R.C.S., aged 42 years.

COOKE.—On Feb. 8th, at his residence, Brunswick-square, suddenly, Thomas Cooke, M.D., F.R.C.S. Eng., aged 57.

DICKINSON.—On Jan. 27th, at Westby House, Boscombe, Bournemouth, J. B. Dickinson, M.D., M.R.C.S., late of Stalybridge, in his 71st year.

RANSFORD.—On Feb. 12th, Gifford Ransford, M.D. Durh., of Sussex-square, aged 56.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (9.30 A.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.), London Throat (2 P.M.).

TUESDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (22nd).—St. Bartholomew's (1.30 P.M.), University College, (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (23rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.).

FRIDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (25th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (20th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. S. West: Some of the Clinical Aspects of Granular Kidney. (Lettsomian Lecture.) Lecture II.—Syllabus: Albuminuria in Granular Kidney. Physiological Albuminuria; postural, dietetic, cyclical, intermittent albuminuria. Albuminuria in the apparently healthy. The different forms of albumen, and the value of the different tests used to detect them. The frequency of albuminuria varies at different ages, and has different significance. Two broad groups: 1. From 25 years onwards.—Albuminuria and Granular Kidney increase in frequency *pari passu* with age. Importance of Albuminuria in relation to life insurance. 2. Up to the age of 25 years.—Frequency of Albuminuria in infancy, childhood, at school-age, and in early adolescence; its significance; in no case, strictly speaking, physiological. Albuminuric retinitis, a late sign. Rare in chronic Parenchymatous Nephritis. White patches the earliest change, but preceded by recognisable changes in vessels. Exists long without impairment of vision, but failure often sudden. Of grave significance, for life rarely preserved long after its occurrence. Amblyopia, Detached Retina. Other eye changes dependent on hæmorrhage. (Various tests for albumin will be demonstrated and cases and specimens shown as far as practicable.)

TUESDAY (21st).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—Discussion on Pseudo tuberculosis. To be opened by Dr. G. S. Woodhead, and continued by Prof. S. Martin, Prof. J. MacFadyean, Dr. Washbourn, Dr. Wethered, Mr. Fullerton, and Mr. Pakes. (Illustrated by microscopic and lantern slides.)

CHILDHOOD SOCIETY (Library of the Sanitary Institute, 72, Margaret-street, W.).—8 P.M. Mrs. I. W. Wallis: Mental Hygiene as a Basis for Character Formation.

CHELSEA CLINICAL SOCIETY (Holy Trinity Parish Hall, Pavilion-road, S.W.).—8 P.M. Card Specimens: Dr. Vinrace: Ulcerative Perforation of the Stomach. 8.30 P.M. Papers:—Dr. G. Herschell: Atony and Dilatation of the Stomach.—Dr. Penny: Radical Cure of Hydrocele.

WEDNESDAY (22nd).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—4.30 P.M. Informal Exhibition of Cases. 5 P.M. Ordinary Meeting.

HUNTERIAN SOCIETY.—8.30 P.M. Mr. C. J. Symonds: The Value of Individual Symptoms in Perforative Peritonitis, more especially in regard to Operation.

FRIDAY (24th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Special General Meeting.

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Clinical Evening. The following cases will be shown:—Dr. Rolleston: Multiple Periarticular Bursæ.—Dr. F. P. Weber: Recommencement of Muscular Atrophy long after Infantile Paralysis.—Dr. Cahill: Unilateral Hypertrophy of the Female Breast resulting from Pressure.—Dr. Caley: A Case of Tabes Dorsalis with Arthropathy and Pulmonary Fibrosis.—Mr. G. B. Hunt: Rheumatoid Arthritis with enlarged Spleen and Glands in an Infant.—Dr. Washbourn and Mr. W. Arbuthnot Lane: A Patient from whom a Cerebral Tumour was Removed seventeen months ago.—Dr. Mouat-Biggs: Extreme Case of Factitious Urticaria.—Dr. R. Crawfurd: Myositis Ossificans Progressiva.—Dr. L. Guthrie: A Case of Congenital Paralysis.—Dr. StClair Thomson: A Man aged 36 years complaining of Dysphagia found to be affected with Unilateral Paralysis of the Eighth and Bulbar Nerves.—Dr. L. Guthrie: Acute Atrophic Paralysis affecting both Upper Extremities.—Mr. E. W. Roughton: Tumour of Maxilla of Doubtful Nature. Patients will be in attendance at 8 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (20th). — ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Dr. T. G. Brodie: The Chemical Pathology of some Infective Diseases. (Erasmus Wilson Lecture.)

TUESDAY (21st).—WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-st., W.).—4 P.M. Dr. T. D. Savill: On the Slighter Forms of Mental Disorder and how to deal with them.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Horsley: Surgery of the Nervous System (lantern demonstration).

ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. E. Ray Lankester: The Morphology of the Mollusca.

WEDNESDAY (22nd).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Dr. T. G. Brodie: The Chemical Pathology of some Infective Diseases. (Erasmus Wilson Lecture.)

EVELINA HOSPITAL (Southwark-bridge-road, S.E.).—4.30 P.M. Dr. G. Carpenter: Clinical Demonstration on Medical Cases. (Post-Graduate Course).

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Wethered: Difficulties of Diagnosis in Pulmonary Tuberculosis.

THURSDAY (23rd).—ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. G. V. Poore: The Earth in Relation to the Preservation and Destruction of Contagia. (Milroy Lecture.)

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Galloway: Dermatological Demonstration. (Post-Graduate Class.)

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Pathological Demonstration to Senior Students.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.—4 P.M. Dr. Barlow: Demonstration of Selected Cases.

ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Dr. A. Macfadyen: Toxins and Antitoxins.

FRIDAY (24th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Dr. T. G. Brodie: The Chemical Pathology of some Infective Diseases. (Erasmus Wilson Lecture.)

ROYAL INSTITUTION OF GREAT BRITAIN. — 9 P.M. Prof. O. Lodge: Coherers.

SATURDAY (25th).—ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Right Hon. Lord Rayleigh: The Mechanical Properties of Bodies.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1898, which was completed with the issue of Dec. 31st, and the Title-page to the Volume, were given in THE LANCET of Jan. 7th.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1898 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 6*d.*

To be obtained on application to the Manager, accompanied by remittance.

THE CORNISH MADEIRA.

EARLY this month the town-hall of Falmouth was the scene of a meeting of the East Kerrier Rural District Council, from the deliberations of which body, as reported in the local press, some instructive lessons may be learned. The quoted passages are from the *Western Mercury*. One of the questions before the council was the drainage of Flushing, concerning which a new scheme has been proposed. Mr. Blamey, medical officer of health of the Falmouth Rural and Penryn Urban Districts of Cornwall, in the course of his duties reported a case of typhoid fever occurring at Flushing and pointed out that the house in which the case occurred was a possible source of danger to the community. Two resolutions from a neighbouring parish council were then read, one of which was to the effect that if the Sanitary Committee of the East Kerrier District Council went to Flushing and looked at the place for themselves they would not feel justified in sanctioning the expense to be incurred under the drainage scheme, while the other called attention to the language of condemnation which had been used by a clergyman in the vicinity as being detrimental to the village of Flushing as a health resort. At this stage of the proceedings there arose a Mr. J. Cloak of Flushing who appears to have called the clergyman's language "unmannerly, unmanly, and ungentlemanly," thinking that it "would have the undesirable effect of preventing people from coming to the Cornish Madeira." He was followed by a Mr. Dunstan who "had lived in Flushing for nine years and enjoyed the best of health. If a man had a bit of a cold it was put down to typhoid. It was typhoid on the brain. According to what 'these reverends' said Flushing was death for anybody ..... it was the biggest falsehood ever put into print to connect a certain woman suffering from typhoid with the eating of oysters taken from the beds at Flushing." As this last expression was a direct imputation of falsehood upon Mr. Blamey and other medical men in the neighbourhood the speaker was ordered to withdraw his words. This he did after much wrangling.

This debate forms a good example of the troubles of the medical officers of health in unenlightened districts. The inhabitants of Flushing object to the publication of the sanitary deficiencies of their village. Instead of trying to set their houses in order they attempt to cajole or browbeat responsible persons into silence that they may enjoy the money of the visitor whose health they are prepared to subject to all the risks rife in a place which is (to use Mr. Blamey's words) "riddled with cesspits." The medical officer of health in such cases has to be very firm. He knows that his action is unpopular and may lose him patients, while his official salary in many, nay, most, cases bears no relation to the responsibilities which he has to bear or the duties which he has to discharge and certainly gives him no pecuniary standpoint from which he can afford not to consider on which side his bread is buttered. Does he get proper credit as a rule for his work which is arduous and unselfish? In the case under consideration Mr. Blamey was well supported by the district council and the partisans of a filth *régime* in Flushing have themselves to thank for the publicity which their cesspits have received, but we have before now known the medical officer of health to be left in the cold by those whom he served.

SUGAR-FREE WINES.

To the Editors of THE LANCET.

SIRS,—Being anxious to obtain the above for a diabetic can you or one of your readers inform me if such wines exist, and if they do where they can be obtained? I am, Sirs, yours faithfully,

Feb. 15th, 1899. R. S. P.

THE EFFECT OF TOBACCO ON DEVELOPMENT.

DR. E. STUVERS, President of the Wyoming Scientific College, has given in the American *Quarterly Journal of Inebriety* some surprising statistics illustrative of the effect of tobacco on the development of the young. From measurements of 187 of the class of 1891, Yale, he found that the non-smokers gained in weight during the college course 10·4 per cent. more than the regular smokers and 6·6 per cent. more than the occasional smokers. In height the non-users of tobacco increased 24 per cent. more than the regular users and 12 per cent. more than the occasional. In increase of chest girth the non-users had an advantage of 26·7 per cent. and 22 per cent. and an increase of lung capacity of 77·5 per cent. and 49 per cent. respectively. These observations with respect to the dwarfing effects of tobacco are confirmed by observations of the class of 1891, Amherst, made by Dr. Edward Hitchcock. He found that in weight non-smokers increased during their course 24 per cent. more than the smokers; in increase in height they surpassed them 37 per cent., in gain of chest 42 per cent., and in gain of lung capacity 75 per cent. We should be sorry to see these statistics quoted as particularly instructive, for the numbers on which they are founded are too small for trustworthy inferences.

THE SALE OF CATHETERS TO THE PUBLIC.

DR. BARELLA, a Belgian provincial practitioner, has recently been speaking pretty strongly at a meeting of the *Académie de Médecine* on the subject of criminal abortion in his neighbourhood. On looking through the vital statistics of the district around Charleroi for the last 20 years it is evident that the number of births has greatly diminished in proportion to the population and, indeed, criminal

feticide is so usual a thing that in some parishes there are as many abortions known to medical men as there are births, to say nothing of the probably still larger number where the results are not sufficiently serious to require medical assistance. The means generally employed is a soft catheter with a stylet which can be obtained for a few sous at the shop of any druggist. The sale of such instruments should, he thinks, be put a stop to, for with the exception of a few men with stricture or prostatic disease who are always more or less under the supervision of some surgeon who could see that they were supplied with whatever instruments he thought desirable, the public has really no legitimate use for catheters and no hardship would be entailed on anyone by a prohibition against their sale. He feels sure that were such a measure passed it would diminish the number of deaths from metroperitonitis which in his own town amount to three or four per annum, to say nothing of cases of chronic uterine disease originating from the criminal use of these catheters.

THE ANTI-VIVISECTION QUESTION.

To the Editors of THE LANCET.

SIRS,—I shall be glad to know if there are any other important books, pamphlets, &c., dealing with this question, especially in its controversial aspect. Perhaps you are aware that at the instance of the Anti-vivisection Society established in Bombay a memorial has been prepared to be forwarded to Her Majesty the Queen praying against the establishment of a Pasteur Institute in India on the ground of anti-vivisection, and I am ashamed to say that some—perhaps a few—of the medical practitioners in Bombay have lent it their support. As you will admit this movement is in direct opposition to the progress of medical science, and ultimately jeopardising the vast benefits that may accrue to humanity at large, the position of these medical men in the agitation is quite untenable. In order, therefore, to raise and strengthen our own protest against it I request you to kindly furnish the required information. I am, Sirs, yours faithfully,

Bombay, Jan. 7th, 1899. INQUIRER.

*** Our correspondent should apply to the Association for the Advancement of Medicine by Research.—ED. L.

SMALL-POX IN JOHANNESBURG.

A CORRESPONDENT in Johannesburg has sent us a copy of *South Africa* of Dec. 31st, 1898, in which it is stated that from Nov. 20th, 1897, to Dec. 15th, 1898, there were 1385 persons (397 white and 988 coloured) admitted to the small-pox lazaretto in that town. The deaths totalled 393 (102 white and the remainder coloured). The percentage of deaths on cases admitted was therefore 25·7 Europeans and 29·2 blacks. It was found that no death had occurred among patients vaccinated within the past seven years.

"THE MEMBERS' GOWN."

To the Editors of THE LANCET.

SIRS,—The usual custom at most colleges and universities being that where Fellows wear a gown Members also are allowed the same thing, to which the Royal College of Surgeons seems to take exception, in order to smooth matters down and make them agreeable to all parties I suggest (1) that both Fellows and Members have a special gown to wear on suitable occasions, (2) that they should be of the royal blue colour with red facings, (3) that the distinction between Fellows and Members should be designated by the shape and texture of the gowns worn as is the case with a Queen's Counsel and an ordinary barrister-at-law, and (4) that the matter should at once be taken in hand by the College Council and brought to a happy conclusion instead of causing angry feelings through delay.

I am, Sirs, yours faithfully,

M.R.C.S.

A USEFUL HANDKERCHIEF.

WE have received from Messrs. Squire and Son of 413, Oxford-street, a specimen of what is described as a new "Antiseptic Handkerchief." It is made of the fibrous kind of paper popularly known as Japanese, but the "finish" is a little more delicate than usual, and the handkerchief is bordered with a quaint artistic design somewhat resembling lace. The article is intended for use in cases of nasal, throat, and lung affections where it is better to burn the handkerchief than to send it to the laundress. The idea is a good and useful one, but as the handkerchief is very easily torn it does not lend itself to the ordinary purpose of blowing the nose. Boxes containing 100 are sold at 2*s.* 6*d.*

A METHOD FOR THE STERILISATION OF URETHRAL INSTRUMENTS.

To the Editors of THE LANCET.

SIRS,—I have devised a simple apparatus for sterilising urethral instruments. It is an oblong metal box, in size 18 inches long, four inches wide, and four inches in depth, provided with two sliding open wire-work trays, upon which the instruments are laid, whilst underneath is a layer of lint, stretched on another wire tray, the tray to be just off the floor of box. On the lint is sprinkled a thin layer of powdered paraform or trioxymethylene, which slowly gives off vapour, effectually sterilising in 24 hours the instruments in the upper two trays (Guyon). The box is closed by a metal cap fitting closely. Formol may be used instead of its derivative, but is liable to injure soft instruments. Instruments may be left in the box for any length of time without harm. It is as well to immerse the instruments for a few minutes in a boric acid solution just before use, as if they are taken directly from the steriliser and passed into the urethra they may cause some little stinging sensation. Of course all instruments should be thoroughly washed in soap-and-water and dried before being placed in the sterilising box, and the box itself should be kept at a temperature not below 56° F. Messrs. Evans and Wormull of Stamford-street have kindly carried out my design. I am, Sirs, yours faithfully,

GERALD DALTON, M.S.A. Lond., &c.

SOUTH AMERICAN MUMMY HEADS.

A CURIOUS mummified head has recently been acquired by the Peel Park Museum, Salford, from Ecuador, as an addition to the ethnographical collections. It is said that when a native kills an enemy he carries the head home to his village and keeps it as an evidence of his prowess. The brain, eyes, and soft tissues from within the skull are removed. The bones of the skull are smashed up and removed piecemeal, to facilitate which the scalp has probably been previously divided, and nothing but the skin of the head with the hair remains. It is then boiled in a decoction of herbs for some time, taken out of the liquid, and rapidly filled with hot stones, which causes considerable shrinkage. This process is repeated till the head is reduced to the size of an orange. The lips are stitched up; the eyelids have shrunk and are completely hidden by the brows, on which there is a thin growth of hair. The face is, of course, much distorted, the chin, lips, and lower part of the nose protruding. The hair seems unnaturally thick from the shrinking of the skin crowding the hairs together. A few hairs on the chin represent the thin growth of beard possessed by these natives. It is said that where the custom of preserving these trophies prevails the various governments of South America strictly forbid their removal under heavy penalties. It is not stated how the committee of the Salford Museum obtained this relic. In Buckland's "Curiosities of Natural History," Fourth Series, we find an account of these heads, and Buckland goes on to say (p. 43 in the book):

> "A specimen of this kind was exhibited in the Exhibition of 1862. I was very anxious to purchase it, but the owner asked *only* £300 for it; he afterwards came down and reduced his price considerably. I was exceedingly sorry I could not afford to buy it; it certainly was a gem of a head. I should be curious to know where it ultimately went."

At the present moment there is one of these heads to be seen in a shop in Cranbourne-street and by the courtesy of the proprietor we were allowed to examine it. The whole of the soft parts have been dissected off the skull, an incision having been made from a point in front of and above the external auditory meatus on one side to the other and passing across the opening of the eyes and the glabella. This incision has been sewn up while the mouth is closed by means of thorns passed through the lips with figure-of-eight ligatures over them. The ears are ornamented with cords covered with green beetle wings and finished with tassels made from the red and yellow feathers of the macaw.

FUNCTION OF THE CEREBELLUM.

RECENT investigations of the functions of the cerebellum made by Professor Raffaele Gatta of Naples are described by him at considerable length in the *Gazzetta degli Ospedali* of Jan. 22nd. After a summary of the views of various experimenters he gives details of his method of operating on dogs, anæsthesia being produced by chloroform or ether and the wounds being dressed antiseptically. He noted the results produced by removal (1) of the middle lobe, (2) of either half, and (3) of the whole. In each of these three conditions after the subsidence of the first severe effects, such as tonic extension of the limbs, rotary movement of the body, opisthotonos, &c., the animal was found to have lost the faculty of balancing itself, walked with a staggering gait, and showed marked weakness of the hind legs, especially on that side of the body on which the lesion of the cerebellum was. In a period varying from one to three months the normal power of walking was regained. Professor Gatta concludes that with respect to function the cerebellum is a homogeneous organ, not a group of organs, and that its action, excited by peripheric stimuli and central impressions, has for its object to produce different attitudes and movements of the body.

THE HERMETICAL CLOSURE OF METALLIC RECEPTACLES.

ACCORDING to a note in the *Revue d'Hygiène* a French mechanician named Liais has invented a new and highly ingenious method of closing tins and other metallic receptacles containing perishable substances. At present the means usually adopted are two-fold—soldering and plugging,—but to both there are serious objections. In the first case, the metallic cement employed is seldom or never free from lead, and in the second the more or less elastic plug or stopper nearly always contains an appreciable quantity of the same poisonous metal in the form of an oxide. The system proposed by M. Liais consists essentially in the utilisation of atmospheric pressure by means of a vacuum. It is said to be easily applicable and perfectly air-tight while *in situ*, while another great point in its favour is the facility with which

the receptacle can be opened. All that need be done in order to gain access to the contents is to punch a minute hole in an indicated area with any pointed implement, when at once the air rushes in and the cover becomes removable without the slightest risk of damage to the fingers of the operator. The inner face of the cover consists exclusively of cork and it is claimed that in consequence no contamination of the contents of the receptacle can possibly occur. An apparent objection to M. Liais's invention would seem to be that once punctured the air-tight cover would no longer be of use for closing a partially-emptied vessel, but in spite of this the new atmospheric closer, if it really acts efficiently as stated, will no doubt find favour with, amongst others, wholesale and export druggists.

THE ARCHÆOLOGY OF INFECTIOUS SEXUAL DISORDERS.

IT has hitherto been generally admitted that in the extant medical and erotic literature of ancient Greece and Rome there is no direct reference to communicable diseases of the genitals and this omission has supplied an argument to those who maintain that venereal diseases did not at that time exist in southern Europe. Within the last ten years, however, several important Greek MSS., up to that time unknown, have been discovered written on papyrus in the wrappings of Egyptian mummies. One of these works, of Christian authorship, entitled "Logia, or the Sayings of Our Lord," has already been briefly noticed in THE LANCET of July 17th, 1897, p. 179. Another papyrus contained a small collection of poems by Herodas or Herondas, a writer who made use of Doric Greek and is with the utmost probability referred to the era of Theocritus, say, about 250 B.C. So much of his works as has been recovered consists of eight or nine fairly complete poems, or portions of poems, giving sprightly pictures of contemporary life and manners largely tinged with Aristophanic colouring. In the piece which is numbered 6 in the collection a lady named Metro calls at the house of a lady named Koritto for the purpose of obtaining the address of the maker of a red leather phallus (*βαυβών*) which belonged to Koritto and had been lent by her to a lady named Eubule. Being questioned by Koritto as to how she came to know about this particular phallus Metro is forced to make the disclosure that Eubule has lent it to another lady named Nossis, whereupon Koritto breaks out into a tirade against Nossis, and after apologising for being more outspoken than is seemly in a woman she exclaims:—

"*χιλίων εὕντων*
ἐν' οὐκ ἂν ὅστις λεπρὸς ἐστι προσδώσω."

("Supposing I had a thousand I would not give her one, even if it had disease in it.") The adjective *λεπρός* usually denotes an infectious skin disease. For some reason or other Dr. W. G. Rutherford, headmaster of Westminster School, in his First Recension of Herondas, published in 1891, reads *σαπρός* in place of *λεπρός*, but the meaning is not thereby essentially modified, for *σαπρός* is frequently used in the Hippocratic writings in the sense of diseased—e.g., bones, lungs, &c. After a good deal of byplay and affected hesitation Koritto tells Metro that the phallus was made by a little bald-headed shoemaker named Kerdon who lived in the neighbourhood and had two for sale at the time she bought hers. In the *Deutsche Medicinische Wochenschrift* of Feb. 2nd the significance of this passage as a contribution to medical archæology is discussed at considerable length by Dr. Iwan Bloch of Berlin.

THE REICHARDT FUND.

Dr. Goodhart and Dr. Savage acknowledge the following further subscriptions and are pleased to report that many of Dr. Reichardt's patients and lay friends are subscribing to a separate fund.

	£	s.	d.		£	s.	d.
Mr. W. J. Walsham ...	5	5	0	Mr. H. D. Palmer	1	1	0
Dr. Samuel West ...	2	2	0	Mr. J. Kenrick Jones ...	1	1	0
Miss Flora Petley ...	2	2	0	Mr. Rayley Owen	1	1	0
Mr. J. C. Barker ...	1	1	0	Mr. Claude Haye	1	1	0
Mr. Hugh Ealand... ...	1	1	0				

"AN APPEAL ON BEHALF OF THE WIDOW OF THE LATE JAMES MACGREGOR LAING."

To the Editors of THE LANCET.

SIRS,—The following donations have been received in addition to those already acknowledged in THE LANCET of July 9th and Oct. 29th, 1898: Dr. T. Brett Young, Halesowen, £1 1s.; W. F. B., £1 1s. We think it now advisable to close the account. A small business has been found for Mrs. Laing. We beg to thank you for your courtesy in allowing the appeal to appear in THE LANCET, and beg to remain,

Yours faithfully,

J. PICKETT,
Feb. 13th, 1899, REGINALD HARTLEY.

THE STOMACH BRUSH.

AN article by Dr. C. D. Spivak of Denver, based on Leube's treatise, "Die Magensonde," and printed in the *Philadelphia Polyclinic* of Nov. 12th, 1898, states that Rumaseus in 1659 published a pamphlet entitled "Organum Saluris, or an Instrument to Cleanse the Stomach." It was patented by the inventor and was sold extensively in London. This stomach brush was made of a smooth, flexible whalebone, from two to three feet long, the lower end of which had a knoblike projection to which a tuft or tassel of silk, cord, or linen was tied. "Those suffering from an excess of mucus in the stomach should introduce the brush and remove the same." At about the same time the stomach brush was used in France, Norway, and Germany. A drawing of the instrument as given in the writings of Socrates (1713) and Heister shows that it was 24 inches long and made of brass rod covered with plaited silk. At the lower end was attached a round brush of horsehair or goat's-beard resembling the brushes now used for cleaning lamp chimneys. The *modus operandi* was very simple. The patient was given a little brandy and a pint of water. The brush was dipped in water and then introduced. At the International Medical Congress held in Rome in 1894 Dr. Fenton B. Turck of Chicago presented an instrument which he called "gyromele" and which is described in his paper printed in THE LANCET of Jan. 28th, 1899.

EUTHANASIA.

To the Editors of THE LANCET.

SIRS,—Within a few weeks I have had under my care a case of carcinoma uteri extending to the bladder and adjacent parts. The pain accompanying the disease in its later stages was severe and only controlled by strong suppositories of morphia, and the patient's death struggle was an awful and most pitiable experience, lasting certainly three or four days. I tried liquor opii sedativus 10 minims every two hours, but only two or three doses could be swallowed. I seek in this letter information from my *confrères* on the treatment one should adopt in such cases—e.g., would it be justifiable to use morphia hypodermically? or to what extent would the inhalation of chloroform be admissible in mitigation of so great agony and distress?

I am, Sirs, yours faithfully,

EUTHANASIA.

Medicus.—The only thing that can be done is to educate opinion, medical and lay, to the understanding that medical service which is worth having is worth paying for and that charity should come from the pockets of those who profess charitable feelings and not out of the pockets of medical men who for practical purposes may be poorer than their club patients. Our correspondent is referred to a series of articles which appeared in THE LANCET recently entitled "The Battle of the Clubs."

M.D.—We do not care to open our columns now for the discussion of the matter. The charges have been fully discussed in a lay paper and with less completeness before the General Medical Council. Of course, it is wrong that the matron should be left to diagnose and treat cases.

L. J.—We have seen the letter and the passage. Moxa was a recognised treatment in European medicine a hundred years ago.

G. H. will find that much of what he desires to have done has been recommended or suggested in our columns.

M.D. (Norwood) must follow his own good taste. It is not necessary to call.

R. M.—It is so useful as to be almost essential.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 16th, 1899.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Feb. 10	29·48	S.W.	0·15	95	67	50	51	58	Fine
,, 11	29·58	S.W.	...	76	56	52	49	52	Cloudy
,, 12	29·29	S.W.	0·10	83	52	45	43	46	Raining
,, 13	28·29	S.W.	0·14	67	56	46	49	51	Raining
,, 14	29·54	S.W.	0·03	67	55	46	45	47	Cloudy
,, 15	29·79	S.W.	0·10	63	54	45	46	47	Cloudy
,, 16	29·87	N.W.	0·38	70	51	41	41	42	Hazy

During the week marked copies of the following newspapers have been received: *Western Mercury, Cheshire County News, Wigan Observer, Coventry Standard, Birmingham Daily Post, Nottingham Daily Express, Devon and Exeter Gazette, North British Daily Mail, Bradford Observer, Dover Express, Lincoln Gazette, Cornish Times, Midland Counties Express, Yarmouth Advertiser, News of the Week, Times of India, Pioneer Mail, Citizen, Scotsman, Architect, Builder, Leeds Mercury, Liverpool Daily Post, Brighton Gazette, Rhyl Record, Mining Journal, Bournemouth Guardian, Yorkshire Post, Stockport Advertiser, Hertfordshire Mercury, Leeds Daily News, The Citizen (Gloucester), Reading Mercury, City Press, Local Government Chronicle, Sanitary Record, Local Government Journal, Bedfordshire Standard, Yarmouth Mercury, Glamorgan Free Press, Lancaster Guardian, Rochdale Times, Surrey Advertiser, Indian Mirror, Science Siftings, Westminster Gazette, Vectis, Bristol Times and Mirror, Hornsell News, Cromer Post, Lowestoft Standard, Dorking Advertiser, Manx Sun, North Herts Journal, Sleaford Gazette, Kent Messenger, Maidstone Telegraph, Bristol Mercury, Kenilworth Advertiser, East End News, Yorkshire Herald, &c., &c.*

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